

**Politics and Strategy in Judicial Decision-Making:
Evidence from federal human trafficking sentencing**

Undergraduate Research Thesis

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Abstract

This thesis investigates the effects of judicial ideology and judge characteristics on sentencing in human trafficking cases. Despite research on federal prosecutions of human trafficking, almost nothing is known about sentencing for federal human trafficking offenders. Previous research on sentencing has been limited by the lack of data linking judges to specific sentencing decisions. Using new data that matches judges to defendants convicted of federal human trafficking offenses, I observe that judicial ideology has an effect on overall sentence length—but only for district court judges appointed by Democratic presidents. I also find that partisan composition of the circuit court, rather than ideology of the sentencing judge, affects the likelihood of downward departures from the Sentencing Guidelines. When Democrat-appointed judges make up a majority of the circuit court, district court judges are 2.1 times as likely to depart below the Sentencing Guidelines. These findings confirm positive political theories of sentencing that model judges as strategic decision makers within a “judicial hierarchy.”

Keywords: human trafficking, criminal sentencing, judicial politics

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1 Introduction

Federal prosecutions of human trafficking in the United States have dramatically increased since the passage of the Trafficking Victims Protection Act (TVPA) in 2000.¹ According to Congress, the explicit purpose of the TVPA was to “combat trafficking in persons, a contemporary manifestation of slavery whose victims are predominantly women and children, to ensure just and effective punishment of traffickers, and to protect their victims.”² In fiscal year 2015, 160 defendants were convicted for offenses related to the TVPA (Motivans & Snyder, 2018). By contrast, a total of 75 defendants were convicted for related offenses from fiscal years 2001 through 2005 (Motivans & Kyckelhahn, 2006). Since 2000, various TVPA reauthorization acts have expanded the nature and scope of the federal trafficking offenses. These statutory changes, in addition to the development of multi-agency federal anti-trafficking task forces, have contributed to the increase in prosecutions. In fiscal year 2018 alone, over 200 federal trafficking prosecutions were initiated (Department of Justice, 2019). Despite the increase in federal prosecutions of trafficking, there is limited research on specific actors in the criminal justice system.

Researchers have discussed the difficulties that prosecutors face as well as recent trends in federal prosecutions of human trafficking (Bracy, Lul, & Roe-Sepowitz, 2019; Clawson, Dutch, Lopez, & Tiapula, 2008). But we lack a rigorous empirical understanding of a crucial actor—judges—in studying federal human trafficking prosecutions. In this thesis, I examine factors that influence judicial sentencing of defendants convicted of trafficking offenses.³ In doing so, I first conduct a preliminary analysis of human trafficking offenders sentenced from 2009-2018, with discussion of specific demographic and case characteristics. Then, I analyze a dataset that links judges to sentencing data.

As Cohen and Yang (2019) explain, previous research on judicial sentencing “has been complicated by the lack of data linking judge identifiers to defendant characteristics and case outcomes.” As a result, previous researchers have used court-level variation in the percent of Democratic or Republican appointed judges to study federal sentencing. But research using aggregate court-level

¹ Victims of Trafficking and Violence Protection Act of 2000, Public L. No. 106–386, 114 Stat. 1464 (2000).

² 22 U.S.C. §7101(a) (codifying the Trafficking Victims Protection Act).

³ This thesis studies sentencing. But there is a normative question as to whether lengthy prison sentences for human trafficking offenses are always appropriate. Little is known, for instance, about the deterrent effect of mandatory minimum penalties for certain forms of sex trafficking. Moreover, recent surveys of survivors of human trafficking suggest that *justice* for survivors does not always come in the form of long terms of incarceration for their traffickers (Yu, Husseman, Love, McCoy, & Owens, 2018). Some survivors, for example, emphasized the importance of rehabilitation and educational opportunities. Studying sentencing is not to displace these important discussions about restorative justice in the context of human trafficking.

data may be biased by certain unobservables that are correlated with partisan composition. Indeed, recent research using a large dataset of sentencing decisions linked with specific judges show results that are not entirely consistent with previous studies that use court-level analysis (Cohen & Yang, 2019). For this thesis, I create a new dataset linking over 800 defendants in human trafficking cases from 76 federal districts to specific case and docket records. To study political ideology, I improve upon existing research by using a continuous measure of judicial ideology developed by Bonica and Sen (2017), in addition to the party affiliation of the appointing president.⁴ Using this methodology, it is possible to study ideological differences in judges appointed by presidents from the same party. In general, previous studies on sentencing have not investigated the effects that partisan composition of the circuit court may have. In studying the effects of circuit court ideology, this thesis tests positive political theories of sentencing that model judges as strategic actors within a hierarchy.

This thesis contributes to the varied literature discussing the impact of judicial ideology and judge characteristics on sentencing decisions. This research is also related to the empirical study of human trafficking prosecutions in the United States. The remainder of the paper is structured as follows. The next section provides brief overviews of the federal sentencing process, sentencing in the context of human trafficking cases, and previous empirical research on judicial sentencing. Section III discusses theories of criminal sentencing. In section IV, I explain the data sources and empirical methodology. A preliminary analysis using the unmatched dataset is presented in Section V. An analysis of the matched dataset is presented in Section VI. Section VII presents the main results and Section VIII discusses relevant implications.

2 Background

In this section, I provide an overview of the federal sentencing process. I also briefly discuss sentencing for human trafficking offenders and describe the relevant statutes. Finally, I review the literature on judicial sentencing, using studies from both state courts and federal courts. For this thesis, I focus on judicial ideology, gender, and race. But due to the limited number of female and minority judges in my final dataset, I primarily focus on the effects of ideology.

⁴ Chief Justice John Roberts has said that “[w]e do not have Obama judges or Trump judges, Bush judges or Clinton judges” (Liptak, 2018). In this thesis, I follow virtually all of the previous empirical studies on sentencing in using party affiliation of the appointing president as a proxy for judicial ideology. That is not to say that judges are *partisan*, but that there are observed differences in judicial-decision making depending on party affiliation of the appointing president. In a recent interview, Maya Sen explains that “[t]he empirical evidence is really clear that judges who are appointed by Republicans tend to vote and rule and write opinions in a more conservative direction. And judges who are appointed by Democratic presidents tend to rule and vote and write opinions in a more left-leaning direction” (Shapiro, 2018).

2.1 Federal Sentencing

The Federal Sentencing Guidelines, first implemented in 1987, created a uniform system to sentence criminal defendants.⁵ Before the Guidelines, judges were granted substantial discretion in imposing sentences. In 2005, the United States Supreme Court decided *United States v. Booker*, which made the mandatory federal Guidelines merely advisory.⁶ As a result, federal judges now have greater discretion in the context of sentencing. Sentencing post-Booker proceeds in a three step process (United States Sentencing Commission, 2018). First, the court calculates the appropriate sentencing range provided by the Guidelines. At this stage, the judge may make a variety of law and fact-based determinations that relate to aggravating or mitigating features in the Sentencing Guidelines. Second, judges determine whether there is any basis in the *Guidelines Manual* to depart from the Guidelines. In order to depart, judges must reach legal considerations in addition to certain factual findings. For the most part, departures are reviewed with a stricter standard than adjustments described in the first step. Finally, courts consider §3553(a) factors (statutory factors that Congress established as general tenets of reasonableness) in deciding the final sentence.⁷ Figure 1 provides an outline of the sentencing process.

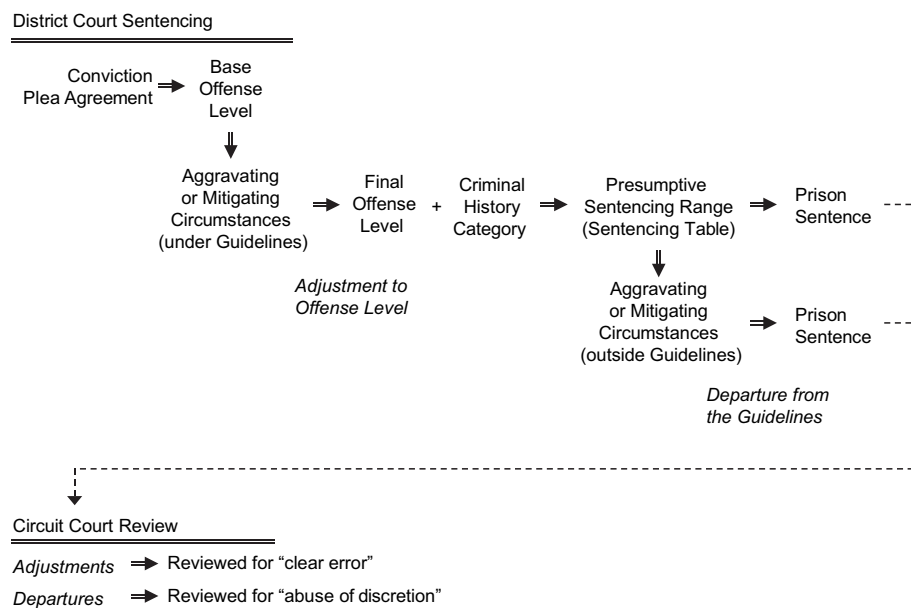


Figure 1: Sentencing model from Schanzenbach and Tiller (2007)

⁵ The Guidelines were created by the United States Sentencing Commission (USSC). The USSC was created by the Sentencing Reform Act of 1984, an important statute that limited the discretion of federal judges. The Sentencing Guidelines were designed to ensure greater uniformity in criminal sentencing. However, Stith and Cabranes (1998) provide an argument against the mandatory Guidelines system.

⁶ *United States v. Booker*, 543 U.S. 220 (2005).

⁷ Considerations include the nature of the offense, public safety, and deterrence.

As shown, adjustments are reviewed for *clear error* and departures are reviewed for *abuse of discretion*. Clear error is a “significantly deferential” standard. A court characterized clear error in the following way, “[w]here there are two permissible views of the evidence, the fact finder’s choice between them cannot be clearly erroneous.”⁸ Departures, on the other hand, involve legal conclusions that are reviewable for abuse of discretion.⁹ In short, the abuse of discretion standard is less deferential than the clear error standard. In determining the sentencing range according to the Guidelines, judges consider the base offense level and the characteristics of the specific offense. The presumptive sentencing range, after the final offense level and criminal history category have been determined, is shown by the sentencing table below. For example, a base offense level of 30 with a criminal history category of III would lead to a sentencing range of 121-151 months in prison.

SENTENCING TABLE
(in months of imprisonment)

Offense Level	Criminal History Category (Criminal History Points)					
	I (0 or 1)	II (2 or 3)	III (4, 5, 6)	IV (7, 8, 9)	V (10, 11, 12)	VI (13 or more)
Zone A	1	0-6	0-6	0-6	0-6	0-6
	2	0-6	0-6	0-6	0-6	1-7
	3	0-6	0-6	0-6	0-6	2-8
	4	0-6	0-6	0-6	2-8	4-10
	5	0-6	0-6	1-7	4-10	6-12
	6	0-6	1-7	2-8	6-12	9-15
	7	0-6	2-8	4-10	8-14	12-18
	8	0-6	4-10	6-12	10-16	15-21
Zone B	9	4-10	6-12	8-14	12-18	18-24
	10	6-12	8-14	10-16	15-21	21-27
	11	8-14	10-16	12-18	18-24	24-30
Zone C	12	10-16	12-18	15-21	21-27	27-33
	13	12-18	15-21	18-24	24-30	30-37
	14	15-21	18-24	21-27	27-33	33-41
Zone D	15	18-24	21-27	24-30	30-37	37-46
	16	21-27	24-30	27-33	33-41	41-51
	17	24-30	27-33	30-37	37-46	46-57
	18	27-33	30-37	33-41	41-51	51-63
	19	30-37	33-41	37-46	46-57	57-71
	20	33-41	37-46	41-51	51-63	63-78
	21	37-46	41-51	46-57	57-71	70-87
	22	41-51	46-57	51-63	63-78	77-96
	23	46-57	51-63	57-71	70-87	84-105
	24	51-63	57-71	63-78	77-96	92-115
	25	57-71	63-78	70-87	84-105	100-125
	26	63-78	70-87	78-97	92-115	110-137
	27	70-87	78-97	87-108	100-125	120-150
	28	78-97	87-108	97-121	110-137	130-162
	29	87-108	97-121	108-135	121-151	140-175
	30	97-121	108-135	121-151	135-168	151-188
	31	108-135	121-151	135-168	151-188	168-210
	32	121-151	135-168	151-188	168-210	188-235
	33	135-168	151-188	168-210	188-235	210-262
	34	151-188	168-210	188-235	210-262	235-293
	35	168-210	188-235	210-262	235-293	262-327
	36	188-235	210-262	235-293	262-327	292-365
	37	210-262	235-293	262-327	292-365	324-405
	38	235-293	262-327	292-365	324-405	360-life
	39	262-327	292-365	324-405	360-life	360-life
	40	292-365	324-405	360-life	360-life	360-life
	41	324-405	360-life	360-life	360-life	360-life
	42	360-life	360-life	360-life	360-life	360-life
	43	life	life	life	life	life

November 1, 2016

Figure 2: Sentencing table from the USSC

⁸ United States v. Riggs, 370 F.3d 382 (4th Cir. 2004), citing Anderson v. City of Bessemer City 470 U.S. 564 (1985).

⁹ Koon v. United States, 518 U.S. 81 (1996).

2.2 Sentencing for Human Trafficking Offenders

The TVPA introduced significant criminal penalties for human trafficking offenses with sentences up to life imprisonment. After the passage of the TVPA, Congress has repeatedly increased criminal sentences for sex trafficking, amounting to a “get tough” policy (Albonetti, 2014). Some of these changes were not necessarily amendments to the TVPA. For example, the Adam Walsh Child Protection Act of 2006 created a new 15-year mandatory minimum penalty for sex trafficking of children under the age of 14.¹⁰ Amendments to the Federal Sentencing Guidelines made by the Sentencing Commission have also increased the penalties for sex trafficking.¹¹

Title 18, Chapter 77 of the United States code is titled “Peonage, Slavery, and Trafficking in Persons.” Chapter 77 criminalizes several distinct offenses—including forced labor as well as sex trafficking. The term *human trafficking* is not entirely precise since the statutes themselves refer only to “sex trafficking” or “forced labor.” At the core, Chapter 77 offenses criminalize various forms of exploitation. Many Chapter 77 offenses specifically highlight “means of force, threats of force, fraud, [or] coercion.”¹² Acts that may be criminalized under Chapter 77 include compelled or coerced labor as well as coerced commercial sex. For minor sex trafficking, force, fraud, or coercion does not need to be proved (commercial sexual exploitation of minors is criminalized conduct under Chapter 77). Moreover, the language of “trafficking” is perhaps misleading. Chapter 77 does not require movement or criminal smuggling.¹³ Someone who knowingly recruits an individual and causes that individual to engage in a commercial sex act violates §1591. Someone who knowingly *benefits* from participation in a sex trafficking venture also violates §1591. Finally, someone who *conspires to* or *attempts to* violate certain Chapter 77 offenses violates §1594.¹⁴

A further complication is that some “human trafficking” cases do not involve Chapter 77 statutes. Some cases involve charges under interstate prostitution statutes, such as the Mann Act statutes or the Travel Act.¹⁵ But these statutes criminalize different kinds of conduct—sex buyers, for example, might be charged with interstate prostitution offenses. For this thesis, I only include cases that involve convictions under Chapter 77 statutes. This likely results in a subset of the actual number

¹⁰ Public L. No. 109–248, §208, 120 Stat. 615 (2006).

¹¹ For example, Amendment 701 provides a new base offense level of 34 for convictions of 18 U.S.C. §1591(b)(1) in §2G1.1, in response to the mandatory minimum created by the Adam Walsh Act.

¹² 18 U.S.C. §1591(a)(2).

¹³ This may be contrary to some publicly accepted definitions of trafficking. A recent public opinion survey found that most participants viewed trafficking as involving smuggling (Bonilla & Mo, 2019).

¹⁴ 18 U.S.C. §1594.

¹⁵ These statutes may include 18 U.S.C. §§2421, 2422, 2423, 2425 and 18 U.S.C. §1952.

of human trafficking cases. However, limiting the analysis to Chapter 77 offenses allows for more consistent comparisons of sentence length. In this thesis, I use the term “human trafficking” to refer to mainly to Chapter 77 offenses.

For the most part, the offenses described in this thesis fall into Zone D of the sentencing grid (Figure 2). There are two statutory minimums that apply in the context of human trafficking. The first mandatory minimum applies to sex trafficking of children under the age of 14 *or* sex trafficking that is effected by means of force, fraud, or coercion. The second mandatory minimum applies to sex trafficking of children under the age of 18 but above the age of 14. The following mandatory minimums for §1591(b) are presented below.

Sex trafficking of children under 14 or by force, fraud, or coercion: if the offense was effected by means of force, threats of force, fraud, or coercion described in subsection (e)(2), or by any combination of such means, or if the person recruited, enticed, harbored, transported, provided, obtained, advertised, patronized, or solicited had not attained the age of 14 years at the time of such offense, *by a fine under this title and imprisonment for any term of years not less than 15 or for life;*

Sex trafficking of children under 18: if the offense was not so effected, and the person recruited, enticed, harbored, transported, provided, obtained, advertised, patronized, or solicited had attained the age of 14 years but had not attained the age of 18 years at the time of such offense, *by a fine under this title and imprisonment for not less than 10 years or for life.*¹⁶

In the context of human trafficking, only sex trafficking has statutory minimums. There are no mandatory minimum penalties for the various forms of labor trafficking. In addition, penalties for sex trafficking are distinct from penalties for labor trafficking—even when the labor trafficking involves victims under the age of 18. Compare, for example, the statutory text for §1589.

Forced labor: *Whoever violates this section shall be fined under this title, imprisoned not more than 20 years, or both. If death results from a violation of this section, or if the violation includes kidnapping, an attempt to kidnap, aggravated sexual abuse, or an attempt to kill, the defendant shall be fined under this title, imprisoned for any term of years or life, or both.*¹⁷

The important point is that criminal sentencing for sex trafficking is not analogous to criminal sentencing for forced labor, and there may be substantial differences in sentence length. The disanalogy extends to considerations under the Federal Sentencing Guidelines. The relevant Sentencing Guideline for sex trafficking offenses is §2G1.1.¹⁸ According to §2G1.1(a), the base offense

¹⁶ 18 U.S.C. §1591(b).

¹⁷ 18 U.S.C. §1589.

¹⁸ United States Sentencing Guidelines §2G1.1.

level is 34 if the offense of conviction is §1591(b)(1) and 14 if otherwise. Currently, convictions for sex trafficking by force, fraud, or coercion and convictions for sex trafficking of minors carry base offense levels of thirty-four. As shown by the sentencing table, the base offense level of 34 is high—sentences range from 151 to 327 months. In contrast, §2H4.1 governs the sentencing of labor trafficking.¹⁹ For forced labor, the base offense level is 22, which results in a sentence range between 41 to 105 months. For conspiracy charges under §1594, there is some controversy over the applicable base level offense. §2X1.1 of the Sentencing Guidelines, which covers conspiracies, attempts, and solicitations, seems to indicate that the appropriate offense level is the base offense level of the substantive offense. According to the sentencing guideline, conspiracy to violate §1591 has a base offense level of 34. But on the other hand, the 9th Circuit has concluded that 14 is the appropriate base offense level for a defendant convicted of sex trafficking conspiracy under §2G1.1(a)(2).²⁰

Given these complexities, it is unclear how federal district judges approach sentencing in the context of human trafficking. It is helpful to start with a somewhat analogous case study—the sentencing of defendants convicted of child pornography charges. In the last few decades, Congress has increased federal penalties for child pornography and expanded criminal statutes (Hamilton, 2011). Like sex trafficking, there are various statutorily established mandatory minimums. For instance, child pornography production has a mandatory minimum of 15 years and distribution/receipt of child pornography has a mandatory minimum of 5 years.²¹ Judges have limited discretion in departing from the mandatory minimum sentence. Apart from cases involving government initiated substantial assistance motions, judges generally cannot depart below the statutory minimum sentence.

The United States Sentencing Commission has expressed opposition to the increasingly punitive child pornography sentencing. Federal judges have also expressed some opposition. A 2010 survey from the US Sentencing Commission found that about 70% of federal district court judges consider the sentences for child pornography possession and receipt to be too severe (United States Sentencing Commission, 2010). A number of specific judges have exercised discretion in reducing sentences for individuals convicted of certain child pornography offenses (Hamilton, 2011; Kaiser & Spohn, 2014; Steiker, 2013). But other judges have complied with the existing sentencing ranges.

¹⁹ United States Sentencing Guidelines §2H4.1.

²⁰ *United States v. Wei Lin*, 841 F.3d 823, 825 (9th Cir. 2016). *Contra* the *Wei Lin* court, Richmond (2017) argues that the correct base offense level is 14 and “[the Lin court] effectively rewrote the Guidelines.”

²¹ 18 U.S.C. § 2256.

Comparing child pornography sentencing to sentencing for other federal offenses, researchers find that the prevalence of downward departures in child pornography sentencing cannot be fully accounted for by differences in judicial characteristics. This suggests that some judges may be using discretion to remedy perceived injustice in the Sentencing Guidelines (Kaiser & Spohn, 2014). In the context of child pornography sentencing, there is substantial variance in the length of sentences. This is further complicated by the fact that circuit courts have varied in their response to the Guidelines, with some appellate courts strongly advising judges to reject applicable Guidelines (Steiker, 2013). In contrast, there has not been sustained opposition to human trafficking sentencing due to the comparatively small number of cases prosecuted each year. But child pornography sentencing suggests that there may be substantial variance in the length of trafficking sentences due to substantial penalties and varied judicial responses. Additionally, the nature of the criminal activity that is criminalized under Chapter 77 is extremely varied. In order to account for large potential differences in sentence length, departures will be studied alongside sentence length in this thesis.

2.3 Judicial Ideology and Judge Characteristics

There has been considerable research investigating factors that may impact judicial decision-making. Frequently studied factors include judge ideology or political affiliation, gender, and race (Boyd & Nelson, 2017; Schanzenbach & Tiller, 2007, 2008; Steffensmeier & Hebert, 1999). Sentencing decisions are primarily determined by the level of offense and the criminal history of the defendant. But judge based factors may influence sentencing—both the calculation of the Guidelines range and the final sentence. Research on the political ideology of judges has found that judges appointed by Republican presidents give longer sentences compared to judges appointed by Democrat presidents (Schanzenbach & Tiller, 2007, 2008).²² Cohen and Yang (2019) study the racial gap in sentence length by judge political affiliation. They find that Republican-appointed judges sentenced black defendants to 3 more months than similar non-blacks, relative to Democrat-appointed judges. Other researchers have found that the sentencing disparity by judge political affiliation is especially salient in the context of so-called “street crimes,” which include violent, theft, and drug offenses. In contrast, Schanzenbach and Tiller (2007) find that sentencing differences based on political affiliation may not exist for certain crimes including white collar and environmental offenses (Schanzenbach & Tiller, 2007). In addition, the ideology of the supervising circuit court may also influence decisions

²² However, it is important to note that the existence of differences in sentence length by political affiliation does not speak to whether the sentences imposed are warranted, fair, or correct.

by district judges. Schanzenbach and Tiller (2007) find that Democrat-appointed judges give lower sentences when politically aligned with they are the circuit court. That is, when a majority of the circuit court are also Democrat-appointees, sentences given by Democrat-appointed district court judges are lower (compared to when a majority of the circuit court are Republican-appointees).

Other factors that may influence decision-making include judge gender and race. Empirical evidence on the effects of gender on sentencing is mixed. Some studies have found that women sentence defendants more harshly (Steffensmeier & Hebert, 1999). But other studies have found that while male and female judges do not generally sentence defendants differently, female judges are more lenient when sentencing female defendants (Boyd & Nelson, 2017). Empirical evidence on the effects of race is similarly mixed (Abrams, Bertrand, & Mullainathan, 2012; Steffensmeier & Britt, 2001; Uhlman, 1978; Welch, Combs, & Gruhl, 1988).

Judicial attributes affect sentencing in various ways. One explanation for why there are differences depending on political affiliation is that Democratic-appointed judges are more sympathetic to defendants' rights (Tiede, Carp, & Manning, 2010). However, previous studies have shown that the strength of this policy preference depends on the nature of the criminal offense. It is not known exactly how judges may view human trafficking offenses in relation to other offenses. Public opinion polling suggests that although there is almost unanimous agreement that human trafficking is morally reprehensible, a majority of respondents believed that the vast majority of victims were female (not necessarily true, especially for labor trafficking) and human trafficking involves smuggling (not true) (Bonilla & Mo, 2019). It is unclear how public opinion on human trafficking may affect judge decision-making and whether judges view human trafficking in the same way as the general public.²³ For federal judges (who are not elected), "the same forces that influence public opinion may influence judges simply because they are members of the public too" (Posner, Epstein, & Landes, 2013). And so, the general public's definition of human trafficking as nearly synonymous with the smuggling of women for sexual slavery may suggest that there are sentencing differences between sex trafficking and forced labor sentencing. However, conventional wisdom suggests that Democrat-appointed judges will give shorter sentences compared to Republican-appointed judges for human trafficking offenses (Schanzenbach & Tiller, 2007).

Judge gender may also have an effect on sentencing in human trafficking cases. Human trafficking, for example, have been described by some scholars as a "women's issue" (Bouché & Wittmer,

²³ Various studies have disagreed about the effects of public opinion on judicial decision-making (Boyd & Nelson, 2017; Cook, 1977; Kritzer, 1979).

2015). This perception is strongly mediated by public framing and media representations of trafficking (DeStefano, 2007; Farrell & Fahy, 2009; Weitzer, 2006). Moreover, human trafficking is a gendered crime, with substantially more male defendants than female defendants and substantially more female victims than male victims. Additionally, previous research has found that female representation in state legislatures is correlated with more comprehensive anti-trafficking legislation (Bouché & Wittmer, 2015). In the context of judging, it has been shown that female judges have shown a greater willingness to vote for the injured (majority female) party in civil sex discrimination cases (Boyd, Epstein, & Martin, 2010).²⁴ And so, female judges may be more sympathetic towards victims in human trafficking cases.²⁵ But this does not necessarily imply that female judges give longer sentences to traffickers. It is perhaps likely that female judges give female defendants shorter sentences. For male defendants, female judges may give longer sentences relative to male judges for human trafficking offenses. However, I believe that the overall effect of gender on sentence length is likely small or nonexistent. Various studies have suggested that, at the trial level, judicial characteristics like gender and race do not strongly influence sentencing decisions. Instead, the judicial recruitment and socialization process result in similar decision-making across gender and racial categories (Gibson, 1983; Uhlman, 1978).

3 Sentencing Theory

According to the *hydraulic discretion* theory, sentencing is a zero-sum situation in which attempts to reduce judicial discretion likely increase prosecutorial discretion.²⁶ Increased prosecutorial discretion may result in a net increase in certain racial or gender disparities. Indeed, given the substantial sentences for sex trafficking, prosecutors have considerable leverage in charging individuals (Spohn, 2014).²⁷ It is difficult to isolate the effect that judges may have. Sentencing decisions may

²⁴ In contrast, Gruhl, Spohn, and Welch (1981) which find that women judges were more likely to sentence female defendants to prison. And previous research using sexual assault case data from the Detroit Recorder's Court find that female judges did not sentence differently from male judges (Spohn, 1991).

²⁵ Judicial empathy has been identified by Glynn and Sen (2015). Using a kinship relations to model personal experiences, they find that judges with daughters are more likely to vote for certain issues.

²⁶ For example, Starr and Rehavi, state that the hydraulic theory is "described as a near-consensus view of sentencing scholars" (Starr & Rehavi, 2013). Other studies also rely in some degree on the hydraulic theory (Miethe, 1987; Shermer & Johnson, 2010; Yang, 2015).

²⁷ For example, it is difficult to account for plea agreements pursuant to Rule 11(c)(1)(C) of the Federal Rules of Criminal Procedure (Fed. R. Crim. P. 11(c)(1)(C)). These plea agreements, known as sentence bargains, allow the government and the defendant to agree to a specific sentence. And so, judicial discretion may be entirely limited in some instances. These plea agreements are not indicated in the U.S. Sentencing Commission data. Thus, it is possible that judges may appear to depart from the guidelines (according to USSC data) when in actuality, the defendant accepted a binding sentence plea.

be strongly influenced by the arguments that prosecutors make, even when controlling for prosecutorial discretion (such as by controlling for plea bargains and excluding government initiated departures). According to traditional attitudinal models of judging, judges are assumed to advance policy goals through their decision-making. However, it is also important to consider the institutional context that judges operate in. District court judges, for example, may be constrained by the policy preferences of the supervising appellate court (Haire, Songer, & Lindquist, 2003). Appellate courts may advance their policy preferences by reversing lower court decisions. District court judges may have a desire to avoid such reversals. Indeed, Posner et al. (2013) have found evidence of “reversal aversion” among district judges in the context of criminal sentencing. Hydraulic theory, however, is compatible with a theory of judges as existing within the “judicial hierarchy.”²⁸ In the context of criminal sentencing, judicial discretion may be constrained by prosecutorial decision-making as well as the hierarchy in which district court judges operate.

3.1 Positive Political Theory of Sentencing

Building upon previous studies from the judicial hierarchy literature, Schanzenbach and Tiller (2007) propose a positive political theory of criminal sentencing that models judges as strategic policy maximizers that anticipate potential responses by the overseeing circuit court.²⁹ The following positive political theory of judicial sentencing is presented:

Instrument Choice Theory: Judges are modeled as strategic policy makers who routinely manipulate doctrines, procedures, and other decision instruments to advance their preferred policies. Judges can make a variety of fact and law-oriented decisions to determine the presumptive sentencing range under the Guidelines. Judges may also depart from the Guidelines, but this invites greater scrutiny from circuit courts (Schanzenbach & Tiller, 2007).

For a variety of reasons, judges seek to avoid reversals of decisions (Baum, 1994). In the context of criminal sentencing, the desire to avoid reversals suggests that judges will use differing “instruments” to advance their sentencing policy preferences. For example, one instrument is to depart from the Guidelines. Another instrument is to use fact-oriented adjustments in the determination of

²⁸ Various scholars have discussed judicial hierarchy in different contexts (Johnson, 2006; Songer, Segal, & Cameron, 1994; Zorn & Bowie, 2010).

²⁹ By *strategic*, I take Schanzenbach and Tiller (2007) to mean that district court judges take into account the decisions or policy preferences of circuit courts in making their own decisions. The strategic account of judging has been discussed by recent survey articles. These articles have provided evidence that judicial behavior is consistent with the assumption of strategic judging. And strategic judging may be a valuable assumption for studying district court decision making. For example, Epstein and Knight (2000) suggest that “the strategic account could be of enormous value in helping us to understand politics on [district courts].”

the Sentencing Guidelines range. But because departures invite a stricter level of review by the circuit court, the ideological composition of the higher court may influence the choice of instrument. For example, when the overseeing circuit court is ideologically conservative, more liberal district judges may use adjustments—rather than departures—to advance their sentencing preferences. The instrument choice theory makes three important predictions about sentencing. First, judges advance policy preferences through the determination of the sentencing range and the final sentence. Judges may have limited ability to exercise discretion in certain factual determinations under the Guidelines. However, the language of the Guidelines is often vague, even in the context of sex and labor trafficking.³⁰ For example, if a sex trafficking offense involved criminal sexual abuse, the Guidelines provide that the base level offense should be increased “[i]f the victim was in the custody, care, or supervisory control of the defendant.”³¹ What counts as supervisory control is understandably vague. As a more general example, consider the sentencing enhancement for obstruction of justice, which turns on whether the defendants’ actions “significantly impeded” the investigation.³² Second, the instrument choice theory predicts that the use of departures is influenced by the ideology of the supervising circuit court. Third, the theory predicts that political alignment between a district judge and the overseeing circuit court has an effect on sentencing length.

3.2 Hypotheses

In accordance with the predictions discussed above, the following hypotheses are presented:

Hypothesis 1A: More liberal judges give shorter sentences relative to more conservative judges for human trafficking offenses.

Hypothesis 1B: Female judges do not give substantially longer sentences relative to male judges for human trafficking offenses.

For the reasons explained above, it is believed that more liberal judges will give lower sentences. This is consistent with the findings from several recent studies on judicial ideology (Cohen & Yang, 2019; Schanzenbach & Tiller, 2007). Although human trafficking offenses do not neatly fall into the existing categories studied by sentencing scholars, it is believed that liberal judges prefer shorter sentences.

³⁰ Stith and Cabranes (1998) discuss the complexity of the Guidelines system.

³¹ United States Sentencing Guidelines §2A3.1.

³² Schanzenbach and Tiller (2007) discuss §3C1.1 of the Sentencing Guidelines.

The overall effect of judge gender is likely more complicated. For example, female judges, relative to male judges, may give longer sentences for male trafficking offenders and shorter sentences for female trafficking offenders. But in general, 1B is believed to hold due to the limited number of female defendants sentenced by female judges.

Hypothesis 2: More liberal judges are more likely to depart below the sentencing range relative to more conservative judges for human trafficking offenses.

Consistent with Hypothesis 1A, it is believed that more liberal judges are also more likely to depart below the Guidelines range. And consistent with the instrument choice theory, liberal judges may use a variety of tools to advance their preferred sentencing policy preferences. For Hypotheses 1 and 2, judicial ideology will be modeled using a continuous measure. Previous studies have used political party of the appointing president to study ideology, so this thesis improves by using a more fine-grained approach to studying individual judge ideology.

Hypothesis 3A: Democrat-appointed judges give shorter sentences when politically aligned with the circuit court compared to when Democrat-appointed judges are not aligned.

Hypothesis 3B: Republican-appointed judges give longer sentences when politically aligned with the circuit court compared to when Republican-appointed judges are not aligned.

Finally, 3A suggests that when Democrat-appointed judges are aligned with the circuit court—that is, when the circuit court is comprised of a majority of Democrat appointees in the year of sentencing—defendants will receive shorter sentences compared to when Democrat-appointed judges are not aligned. And 3B suggests that the political alignment effect holds for Republican-appointed judges. These hypotheses are consistent with the recent positive political theory of judicial sentencing in Schanzenbach and Tiller (2007), which assumes that judges exist within an established hierarchy. While Schanzenbach and Tiller (2007) provide and test a positive political theory of judging, but they do so using a dataset that is not linked to specific judges. Instead, they use district court-level variation in the percent of Democrat or Republican appointees. Although the sample I will use is much smaller, data on specific judges (such as ideological measures) will provide valuable insight into the relationship between ideology and sentencing.

4 Data and Methodology

4.1 Data Sources

Two datasets were created for this thesis.³³ The preliminary dataset is created using the sentencing datafiles from the United States Sentencing Commission. The dataset spans fiscal years 2009 to 2018 (October 1, 2008 to September 30, 2018) and consists of 1,230 defendants convicted of a relevant human trafficking offense. For the purposes of this thesis, a relevant human trafficking offense consists of the following violations: 18 U.S. Code §§1589; 1590; 1591; 1592; 1594. These statutes include both labor trafficking as well as sex trafficking. The preliminary dataset allows for a descriptive analysis of human trafficking sentencing in this time period without subsetting to any particular type of defendant. Data from the USSC included defendant demographic information such as age, gender, race/ethnicity, citizenship status, and prior criminal history. Other relevant variables include the disposition of the case (such as whether the defendant pleaded guilty or the case went to trial), year and month of sentencing, district court where the defendant was sentenced, number of counts of conviction, the Guidelines calculation, the final sentence in months, and whether restitution was ordered. The main advantage of this dataset is that it allows for a more “complete picture” of offender characteristics in human trafficking prosecutions in the past decade. This improves on the methodology employed by Denton (2016), which uses a specific population of offenders in a cluster-sampling design. Judge identifiers, however, are redacted from the USSC dataset.

The final dataset was constructed in two steps. First, I match the USSC dataset with proprietary case-level data from the Human Trafficking Legal Center (HTLC). The HTLC data was manually coded from accessing “Public Access to Court Electronic Records” (PACER) and includes information on judge identifiers. Judge data was then linked to the HTLC data by matching on district court of sentencing, month and year of sentencing, and fuzzy matching on total prison sentence. Duplicates were removed from the dataset based on additional criteria including defendant age, defendant sex, and amount of restitution ordered, if ordered. Additional case information was accessed and manually coded. The HTLC dataset, when matched with the sentencing data and the judge data, resulted in a final dataset of 834 defendants, a match rate of 67.8%. Then, the merged dataset was linked with judge ideology data from Bonica and Sen (2017). Summary statistics are presented for both the preliminary dataset and the final dataset.

³³ The institutional review board at The Ohio State University deemed this study exempt because it relied on publicly accessible data. The final matched dataset is also de-identified by excluding defendant names.

4.2 Methodology

After Booker, the proportion of sentences that were within the Guidelines range decreased, while the proportion of downward departures and above departures increased (United States Sentencing Commission, 2012; Yang, 2014). This thesis focuses on the post-Booker period. More specifically, this thesis focuses on the period from FY 2009 to FY 2018. There are two reasons for doing so. First, there is less variability in the median prison sentence from year to year compared to the pre-Booker period. Median sentences for sex trafficking and forced labor offenses have generally increased since the passage of the TVPA. This may be due to changes in the legislative record. For example, Albonetti (2014) found that Congress sought to substantially increase penalties for human trafficking offenses in the period from 2001 to 2010. In the past few years, sentences have roughly stabilized. Second, there is less variability in the range of sentences in a given year. The distribution of sentences by year will be discussed in the following section.

Previous studies on sentencing have conceptualized sentencing as a two step process (Rodriguez, Curry, & Lee, 2006; Steffensmeier & Britt, 2001). First, there is a decision whether to incarcerate. Second, there is a decision regarding the total prison term. Another common approach treats nonincarcerative sentences as censored values. In this thesis, it is not helpful to characterize sentencing as a bifurcated process or to exclude nonincarcerative sentences. This is due to the fact that almost all the defendants are given a sentence (although some were sentenced to relatively short sentences). Unlike other offenses, there are almost no nonincarcerative sentences in the human trafficking defendant dataset.

In empirical studies, authors have attempted to eliminate the potential impact of prosecutorial discretion by controlling for the Sentencing Guidelines. But as Starr and Rehavi point out, the Guidelines are subject to a complex procedure of charging, fact-finding, plea-bargaining, and Guidelines fact-finding. This results in a failure to accurately model the effect of *judicial discretion* on sentencing outcomes. Cohen and Yang account for potential increases in prosecutorial discretion by accounting for the charging and application of mandatory minimums and the application of government sponsored departures (such as 5K1.1 substantial assistance departures). However, this may not entirely account for potential exercises of prosecutorial discretion. This thesis, in contrast to other studies like Shermer and Johnson (2010); Starr and Rehavi (2013) which have taken a broader approach by expanding data analysis to include certain procedural steps involved in sentencing, takes a more narrow approach. Specifically, this thesis creates two additional dependent variables

based on existing Guidelines data: (1) departure in months from the Guidelines maximum and (2) departure in months from the Guidelines minimum (mandatory minimums are included).³⁴ With these measures, it is possible to measure the *amount* of judicial discretion within a certain Guidelines range. To clarify, these are not necessarily departures from the Guidelines themselves. For example, a defendant might have a Guidelines range of 151-188 months in prison. If the defendant is sentenced to 160 months in prison, the value of (1) is -28 months. The value of (2) is 9 months. Moreover, the calculation of (2) will include applicable mandatory minimums. Using the same example, if there is a mandatory minimum of 180 months, the effective Guidelines range is 180-188 months. This approach allows for a study of variance from the Guidelines, which may inform a richer understanding of judicial decision-making. This methodology may not completely account for all forms of prosecutorial discretion. For example, sentence recommendations submitted by prosecutors can influence the sentencing outcome. But this thesis improves on previous studies by providing an empirical evaluation of the amount of variance from the maximum Guidelines value and the minimum Guidelines value—accounting for the presence of mandatory minimums. This captures important information that may be lost by merely using sentence length as the dependent variable and controlling for the Sentencing Guidelines. It is possible that judicial ideology mediates the variance in sentencing below the Guidelines, but has no effect on the amount of variance within the Guidelines.

In addition to sentence length and variance from the Guidelines, this thesis also studies the *probability* of certain departure categories. Because there is variance in sentence length, I also study the probabilities of downward and upward departures relative to the probability of within range sentences. To account for the presence of prosecutorial discretion, I use a subset that excludes government initiated departures.

The ideology of judges will be tested using the judicial common-space scores from Bonica and Sen (2017). These scores will be described in more detail in the Matched Data section. Following the methodology in Schanzenbach and Tiller (2007), I use a dummy variable (*circdem*) to test the partisan composition of the circuit courts. A circuit court comprised of a majority of Democrat-appointed judges in the year of sentencing is coded as 1, the value of 0 is given if otherwise. Finally, I use the political affiliation of the district judge (party of the appointing president) to model the effects of political alignment.

³⁴ If the Guidelines minimum is below the mandatory minimum, the statutory minimum supersedes the Guidelines minimum.

4.3 Empirical Strategy

For the preliminary analysis, I implement an ordinary least squares (OLS) regression with the unmatched data set. The following dependent variables are used: sentence length, amount of departure from the maximum range, and amount of departure from the minimum range. The following independent variables are of interest: defendant gender, defendant age, defendant level of education, various dummy variables for defendant race, whether the defendant had criminal history, whether the defendant pleaded guilty, whether restitution was ordered, the number of counts, and the year of sentencing. For the final analysis, these independent variables will serve as controls for various defendant-level and case-level characteristics, following previous studies on sentencing (Boyd & Nelson, 2017; Cohen & Yang, 2019; Schanzenbach & Tiller, 2007). I also run an OLS regression using a natural log transformation of sentence length to account for the skewed distribution of sentences.

For the final analysis, two types of models are used. First, I use OLS regression to model the effect of ideology (judicial common space scores) and other judicial characteristics (judge gender, judge age, and judge race) on sentence length, amount of departure from the Guidelines maximum, and amount of departure from the Guidelines minimum. The independent variables from the preliminary analysis will be implemented as controls.

Then, I use a multinomial logistic regression to model the probabilities of a departure below the Guidelines, a departure above the Guidelines, and a sentence within the Guidelines. For the logistic regression, I test a smaller sample of cases (excluding government initiated departures). Despite some degree of natural ordering, multinomial logistic regression is preferred to ordinal logistic regression because there is a limited number of above departures in the dataset and upward departures are generally quite rare.³⁵ To summarize, the OLS regression models will be used to study sentence length and the *amount* of departure (variance from the sentencing range). The multinomial logistic regression model will be used to study the *probability* of departures.

Finally, I run OLS regressions that include an interaction term to model the effect of political alignment in the final dataset as well as a subset that excludes government initiated departures. Specifically, I interact the political affiliation of the district judge (party of the appointing president) with the partisan composition of the circuit court. The main dependent variables of interest are sentence length and amount of variance from the Guidelines.

³⁵ However, similar results are obtained using an ordinal logistic regression.

5 Preliminary Data

There is almost no research on descriptive features of sentencing in human trafficking cases. This section explores how defendant characteristics affect sentence length. The purpose of this analysis is to identify the defendant and case factors that influence the final prison sentence, as well as the amount of variance from the Guidelines. Despite research suggesting that Black males are disproportionately prosecuted for trafficking offenses, it is not clear how defendant gender and race may affect sentencing (Bouché & Daku, 2019). And so, differences in sentence length by defendant race and gender are worth investigating.

5.1 Charging Strategy

Prosecutors have immense leverage over the sentencing process. In the context of human trafficking, prosecutors can exercise discretion in determining which charges to indict defendants on. But given the absence of data on charging decisions, it is not possible to determine which charges prosecutors rely on. It is possible to analyze which statutes defendants are ultimately convicted under. Table 1 describes the frequencies of specific statutes.

Table 1: Frequencies of Specific Statutes of Conviction

Charge	Statutory Provision	Defendants
Forced labor	1589	35 (3%)
Trafficking (includes labor recruitment)	1590	37 (3%)
Sex trafficking of children	1591	881 (72%)
"Knowing" or "reckless disregard"	1591(a)	755 (61%)
Victim under 14 or force, fraud, coercion	1591(b)(1)	159 (13%)
Victim above 14 under 18	1591(b)(2)	345 (28%)
"Reasonable opportunity to observe"	1591(c)	61 (5%)
Obstruction	1591(d)	20 (2%)
Document servitude	1592	11 (1%)
General provisions	1594	573 (47%)
Attempt	1594(a)	86 (7%)
Conspiracy to violate other	1594(b)	9 (<1%)
Conspiracy to violate 1591	1594(c)	432 (35%)

Many of these categories overlap and data for specific subsections may not be complete. §1589 and §1590 are statutes pertaining to labor trafficking. 1590 is a broader statute and includes labor recruitment and other practices. Illegal use of documents in furtherance to labor trafficking, §1592, is a statute that often pertains cases of labor trafficking involving visa fraud. The most common statutes of conviction are §1591 and §1594. §1591 criminalizes the sex trafficking of children. §1594

lists general provisions against human trafficking. In practice, prosecutors rely on §1594 in cases where there trafficking is either attempted or there is a conspiracy to engage in acts of trafficking. These charges may reflect undercover government “sting” cases, where federal law enforcement agents may pose as a minor. However, some convictions under §1594 do involve actual victims. And so, the statutes of conviction do not necessarily track the substantive nature of the offense.

Several points are of note. First, §1591(a) requires the government to prove that the defendant “knowingly” or “in reckless disregard of the fact” engaged in acts of sex trafficking or financially benefited from it. §1591(c) creates an exception to this. In cases where “the defendant had a reasonable opportunity to observe the person,” the government “knew, or recklessly disregarded the fact, that the person had not attained the age of 18 years.”³⁶ But this exception is not common; only 61 defendants were convicted of this subsection of the statute. This may indicate that prosecutors are unwilling to charge individuals with this specific subsection or that prosecutions of trafficking generally have enough evidence to prove that the defendant acted either knowingly or with reckless disregard. It is also important to note that sex trafficking of a victim above the age of 14 but under the age of 18 is more common than trafficking of a victim under the age of 14 or trafficking by force, fraud, or coercion. Third, many defendants are convicted of a single violation of §1594(c). Given that only §1591 includes statutory minimums, this may also be evidence of plea bargaining decisions, where prosecutors drop §1591 charges in favor of a §1594 charge.

Table 2: Number of Counts

Number of counts	Defendants
1	832 (68%)
2	173 (14%)
3	82 (7%)
4	43 (3%)
5	21 (2%)
6	23 (2%)
7 and greater	56 (5%)

Table 2 shows the number of counts that defendants are convicted on. The majority of defendants are convicted of a single charge. It may be the case that many of the single count convictions are defendants who were originally charged with more offenses (a practice known as “charge-stacking”). Indeed, 806 out of 832 (97%) of the single count defendants pleaded guilty. This may suggest that prosecutors have substantial bargaining power in the context of human trafficking.

³⁶ 18 U.S.C 18, §1591(c).

5.2 Summary Statistics

Table 7 provides summary statistics for the USSC dataset. The average age of the defendants is 32 years old. 1,005 (81.7%) defendants were male and 225 (18.3%) defendants were female. 182 defendants were identified as White, 820 defendants were identified as Black, and 192 defendants were Hispanic. 1036 defendants (84.2%) pleaded guilty. The average sentence length is 167 months.

In general, about 97% of federal defendants plead guilty.³⁷ In contrast to defendants charged with other federal offenses, defendants charged with human trafficking offenses appear less likely to plead guilty. One reason for this may be the significant penalties imposed by mandatory minimums for sex trafficking. Because individuals charged with sex trafficking may face minimum sentences of 10 or 15 years, they may be greater incentives to go to trial. Figure 3 shows the distribution of sentences by year. Data from fiscal year 2009 were not included in the visualization due to a limited number of sentences.

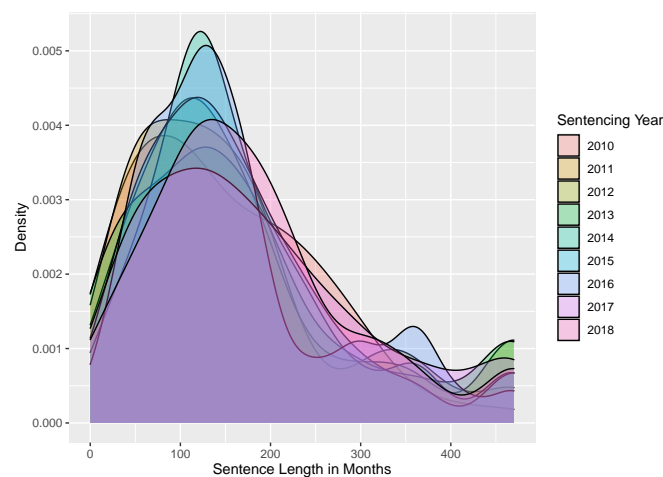


Figure 3: Density plot of sentence length by year

From the time period of 2010-2018, there do not seem to be significant changes in the overall distribution of sentence length. Sentences are clustered around several specific x-values. These values include mandatory minimums for sex trafficking: 120 months and 180 months. The largest cluster is at 120 months, which is the mandatory minimum for sex trafficking of a minor above the age of 14 years. The dataset also includes a number of life sentences coded at 470 months. The distribution of sentences is relatively consistent from year to year. However, the distribution of sentences is asymmetric and right-skewed. Given the skewed distribution, ordinary least-squares (OLS) estimation may lead to biased results. In later analysis, a natural log transformation of

³⁷ United States Sentencing Commission (2019).

sentence length will be used as an additional dependent variable.

As I described in the methodology, alternative dependent variables will be used to measure the amount of departure from the Guidelines maximum. Figure 4 shows the amount of difference from the sentencing range maximum and minimum.

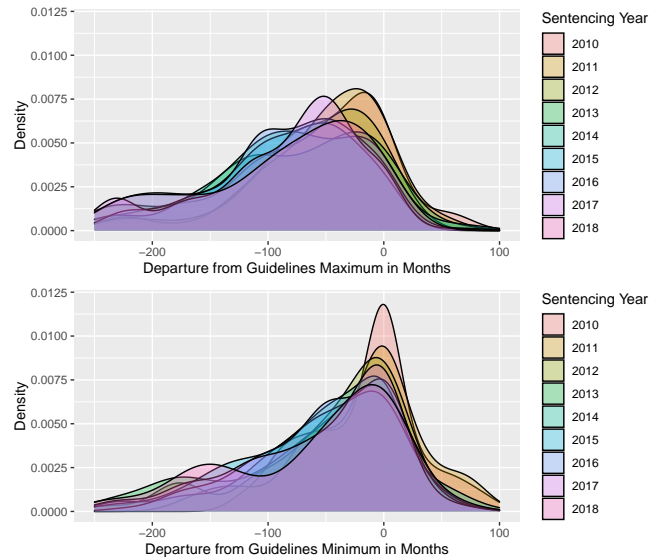


Figure 4: Density plot of departures from Guidelines

The distributions of variance from the maximum and minimum are noticeably less skewed compared to sentence length. In fact, Figure 4 shows that many sentences do not depart from the sentencing range minimum (clustering around the value of 0). These are often instances where the mandatory minimum is applied. The distribution of departures is also relatively consistent from year to year.

5.3 Gender and Race on Sentence Length

Gender and racial disparities have been observed in the prosecutions of human trafficking cases (Bouché & Daku, 2019; Denton, 2016). In fiscal year 2015, a majority of the defendants charged with trafficking offenses in district court were male (Motivans & Snyder, 2018, 8). A majority of the defendants charged were also black. This does not indicate that *unwarranted* disparities are present.³⁸ However, gender and racial disparities are well observed in the criminal justice system (Cohen & Yang, 2019; Fischman & Schanzenbach, 2012; Mustard, 2001; Starr, 2015; United States Sentencing Commission, 2012). For defendants, it is likely that female defendants receive shorter

³⁸ To be precise, my use of the term “sentencing disparities” does not assume that certain sentencing differences are *unfair* or *unwarranted*. For example, Bierschbach and Bibas (2016) provide a critique of the use of the term “disparities.”

sentences. Judges' knowledge about sex offenses is accordingly limited, with research showing that some judges believe female sex offenders deserve lower sentences because they are less likely to reoffend (Bumby & Maddox, 1999). For trafficking offenses, sentences vary depending on various defendant characteristics, as shown by Figure 5.

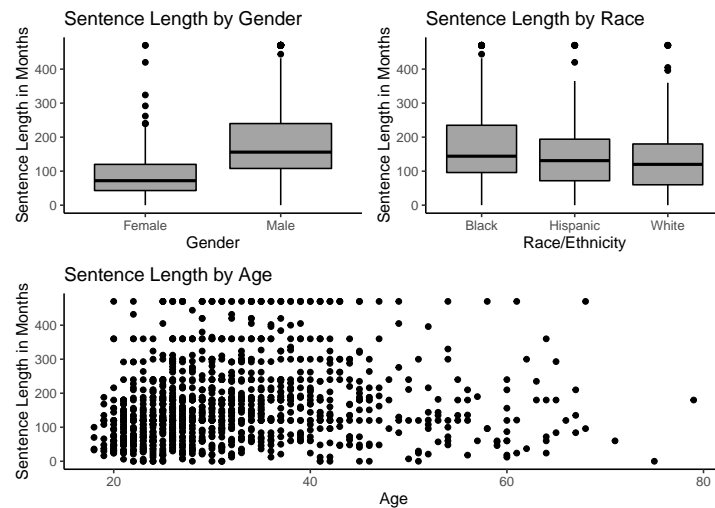


Figure 5: Defendant characteristics and sentence length

Indeed, male defendants are given longer sentences on average compared to female defendants. Male defendants are sentenced to an average of 185.5 months compared to 94.2 months for female defendants. This likely reflects the nature of sex trafficking. In general, the majority of victims are female while the majority of traffickers are male. Female offenders, even when facilitating sex trafficking, may be victimized or abused by male offenders. And often, human trafficking takes a hierarchical nature. As the 11th Circuit explains: “[a]t the top of each pimp’s organization was his ‘bottom girl,’ a trusted and experienced prostitute or female associate.”³⁹ The fact that “bottom girls” are in such a position may mean that they are victimized. But they may still engage in conduct that is in violation of sex trafficking statutes, such as recruiting victims to commercial sex. And so, when bottom girls are prosecuted, they may receive shorter sentences compared to sentences given to the main trafficker.⁴⁰ This fact seems to be reflected by the substantial difference in sentence length. In sex trafficking prosecutions, it is often difficult to prove elements of coercion (Rao, 2017). And so, female defendants who are also victims may serve as valuable witnesses for the prosecution. For these cooperating witnesses, prosecutors may initiate “substantial assistance” departures. These motions allow sentences that are below the mandatory minimum.

³⁹ United States v. Pipkins, 378 F.3d 1281, 1285–86 (11th Cir. 2004).

⁴⁰ Levy (2016) discusses bottom girls in more detail.

There are also differences in sentencing based on race. On average, black defendants are sentenced to 181.2 months while white defendants are sentenced to 142.1 months. Hispanic defendants are sentenced to 154.3 months. These sentencing differences do not necessarily indicate that there are unwarranted sentencing disparities. For example, other factors like criminal history may account for differences in criminal sentencing. The following box plots present these differences. In the next section, I control for various factors that may affect the final sentence to determine whether there are additional race-based or gender-based differences.

5.4 Preliminary Results

In order to study sentencing differences while controlling for various defendant and case-level factors, OLS regression is used. First, OLS results are presented for three dependent variables: (1) total sentence length, (2) departure from the final Guidelines maximum calculation, and (3) departure from the final Guidelines minimum calculation. Total sentence length is capped at 470 months, which is how the United States Sentencing Commission treats life sentences. The values of (2) are calculated by taking the difference between maximum Guidelines determination and (1). The values of (3) are calculated by taking the difference between (1) and the minimum Guidelines determination, which is trumped by the mandatory minimum sentence in applicable circumstances. All three of the variables are conceptualized in months, which allows for any effects to be easily interpreted.

Table 12 presents the OLS results. Several interesting findings are worth discussing. As seen in previous studies, plea bargains are shown to have a substantial effect on overall sentence length. Defendants who pleaded guilty are given sentences that are 132 months less than defendants who did not plead guilty (Table 12, Model 1). This result is significant at the 1% level. However, the effect of a guilty plea is much smaller and less significant when the dependent variable is the amount of departure from the Guidelines minimum and maximum (Model 2 and Model 3). This shows that the effect of guilty pleas is well captured *within* the Guidelines. Defendants who pleaded guilty may ultimately be convicted on lesser offenses, which then lead to lower guideline ranges.

Gender is also shown to have a substantial effect. Results show that female defendants receive shorter sentences, with overall sentences that average 67 months less than sentences for males. This is consistent with the existing literature on female offenders, such as Rodriguez et al. (2006) which show that female defendants are given preferential treatment. But the size of the gender difference is unique to trafficking cases. This is consistent with the previous discussion that female defendants,

particularly “bottom girls,” may themselves be victims. These female defendants may cooperate with law enforcement and serve as witnesses for the prosecution. What is interesting, however, is that the effects of gender are not entirely captured within the Guidelines themselves. For female defendants, judges depart on average 34 months from the minimum guideline calculation (Table 12, Model 3). This effect is highly significant and indicates that judges are more lenient—and may use their discretion—when sentencing female defendants. Race also has a significant effect on overall sentence length, but only for African Americans. This finding is consistent with previous studies on sentencing (Ulmer, 2018).

In Table 13, I check model results using a natural log transformation of sentence length. One limitation, however, of using log of sentence length as the dependent variable is that the results are not easily interpreted. However, this model accounts for skew in sentence length, as previously shown in Figure 3. Plea bargain and gender, which both have negative coefficients, are also highly significant in this model. Race is also significant in this model, and African Americans are shown to receive longer sentences on average.

6 Matched Data

6.1 Summary Statistics

The matched dataset is not substantially different from the preliminary dataset. Table 9 provides summary statistics for the matched dataset. The average age of the defendants is 31 years old, compared to 32 years old in the unmatched dataset. In the matched dataset, 689 (82.6%) defendants were male and 136 (17.4%) defendants were female. 122 defendants were identified as White, 566 defendants were identified as Black, and 129 defendants were Hispanic. 713 defendants (85.5%) pleaded guilty. The average sentence length in the matched dataset is 169 months. Summary statistics for the various departure categories are presented below.

Table 3: Number of Departures

Type of Departure	Defendants
Above range	27 (3%)
Within range	280 (34%)
Below range	202 (24%)
Government sponsored	156 (19%)
Substantial assistance (5K1.1)	169 (20%)

As observed in other studies, above range sentences are rare.⁴¹ Within range studies are the most common. Three kinds of below departures are listed. Below range refers to judge initiated departures. Both government sponsored and substantial assistance refer to government initiated departures. Departures also vary depending on defendant gender. Table 4, presents summary statistics for the various departure categories for female defendants. Compared to Table 3, there is a greater proportion of substantial assistance departures for female defendants.

Table 4: Number of Departures for Female Defendants

Type of Departure	Defendants
Above range	2 (2%)
Within range	24 (18%)
Below range	32 (24%)
Government sponsored	26 (19%)
Substantial assistance (5K1.1)	52 (38%)

This may partially explain why female defendants receive lower sentences compared to male defendants. Female defendants who receive substantial assistance motions may have cooperated and served as witnesses for the prosecution. When defendants receive substantial assistance departures or other government sponsored departures, it is likely that judicial discretion is limited in relation to prosecutorial discretion.

To study the effect of sentencing across different kinds of human trafficking, defendants were coded into the following non-overlapping categories. The three categories are forced labor, sex trafficking, and conspiracy (to violate §1591). Table 5 shows that the majority of the cases involve sex trafficking. There are only a few forced labor cases in the sample. This makes it difficult to compare differences between sex trafficking sentencing and labor trafficking sentencing.

Table 5: Summary of Case Type

Type of Case	Defendants
Forced labor	37 (5%)
Sex trafficking	613 (75%)
Conspiracy	172 (21%)

These categories do not necessarily reflect the substantive nature of the case. Instead, these categories are based on the statutes of conviction. For example, some defendants engage in actual sex trafficking but may only be convicted of a single conspiracy charge. Other defendants may engage in both sex and labor trafficking, but may be charged only under labor trafficking statutes.

⁴¹ Schanzenbach and Tiller (2007).

Cases are categorized to account for differences in sentencing. The sex trafficking category includes §1591 cases, which have mandatory minimum penalties. The forced labor category includes §1589, §1590, and §1592 cases. The conspiracy category includes only §1594(c) cases that do not involve any other statute. Defendants with convictions under certain provisions of §1594 provisions and convictions under §1591 are coded as sex trafficking.

Departures also varied depending on the case type. Statistics are presented for the proportion of each departure category within a specific case type. For example, 36% of the sentences in the sex trafficking category were within the sentencing range.

Table 6: Number of Departures by Case Type

Type of Departure	Sex	Labor	Conspiracy
Above range	17 (3%)	7 (18%)	3 (2%)
Within range	222 (36%)	16 (42%)	42 (24%)
Below range	146 (24%)	8 (21%)	48 (27%)
Government sponsored	105 (17%)	7 (18%)	44 (25%)
Substantial assistance (51K.1)	130 (21%)	0 (0%)	39 (22%)

For all three case categories, most cases are either within the sentencing range or below the sentencing range. The proportion of within range sentences is slightly higher for the sex trafficking category than for the conspiracy category. Overall, there are not large differences in the proportion of certain departures across the categories. Within range sentences are slightly higher in the sex trafficking sample compared to the conspiracy sample, which may indicate mandatory minimums.

6.2 Judges

In Table 11, descriptive statistics for judges are provided. In the matched dataset, 211 (25%) judges were female. 674 judges were identified as White, 76 judges were identified as Black, and 64 judges were identified as Hispanic. There are about equal numbers of defendants sentenced by Democrat-appointed judges as there are Republican-appointed judges with 51% Democratic and 49% Republican. At the circuit court level, 528 (63%) defendants were sentenced in a district where the supervising circuit court consisted of majority Democrat-appointees in the year of sentencing.

Judicial ideology scores are from Bonica and Sen (2017). Ideology is computed using the “Judicial Common Space” methodology first developed by Epstein, Martin, Segal, and Westerland (2007).⁴² Rather than using legislative vote records, Bonica and Sen use data on political contri-

⁴² Epstein et al. (2007) builds upon the influential common space measures developed by Keith T. Poole and Howard Rosenthal (Poole, 1998; Poole & Rosenthal, 1985, 1991).

butions from the Database on Ideology, Money in Politics, and Elections to estimate ideology for political actors. In short, this method involves estimating ideal points for political actors by using patterns in campaign contribution behavior. Contributors are assumed to donate to ideologically proximate candidates. And so, it is possible to estimate where political actors fall ideologically based on the behavior of contributors Bonica (2014). District judge ideology is estimated using the average ideology score of the two appointing Senators. Later, I compare the robustness of my main results to alternative measures of judicial ideology. The average score for judges appointed by Democratic presidents is -0.72 and the average score for judges appointed by Republican presidents is 0.79. The main advantage of using a continuous measurement of judicial ideology is that it is possible to determine the relationship between ideology and decision-making within judges appointed by presidents from the same party. Previous studies on sentencing have largely used the party of the appointing president as a proxy for ideology. However, this fails to distinguish between ideological differences within party. A density distribution showing the ideology of the judges in the final dataset is shown below. More liberal judges are given lower values and more conservative judges are given higher values.

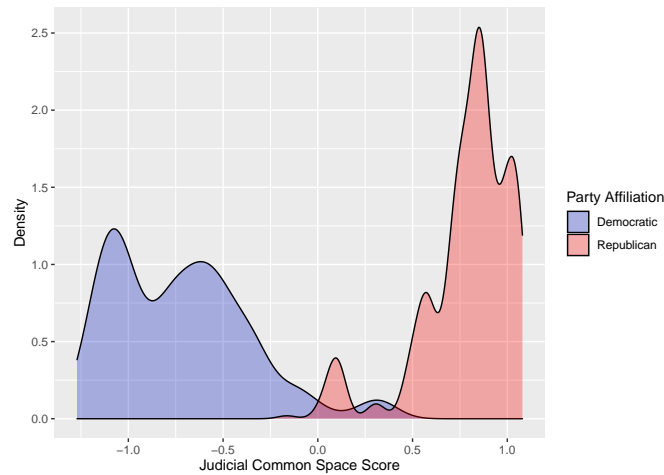


Figure 6: Density plot of judge ideology

Another related advantage of using ideology scores is that some Democrat-appointed judges may be more ideologically conservative than some Republican-appointed judges. As Figure 6 shows, there are significant ideological differences between judges appointed by presidents from the same party. For Republican-appointed judges, there is greater clustering in the distribution of ideology scores. In contrast, the distribution is flatter for Democrat-appointees. On the whole, this suggests that Republican-appointed judges are more ideologically unified.

7 Results

This section presents results for OLS regressions using the matched dataset. I use a variety of OLS regression models to study sentence length. I also implement a multinomial logistic regression to study the probability of departure. Finally, I describe results for OLS regressions that include political alignment as an interaction term.

7.1 OLS Regression

To begin, it is helpful to consider sentence length between different types of cases (sex trafficking, conspiracy, and labor). Table 14 presents OLS regression results for sentence length by the three case types. First, it is observed the defendant gender only has effects for sex trafficking cases. This is consistent with the previous explanation as to why female defendants may be given shorter sentences. In this analysis, judicial ideology is also observed to be significant only in the sample of sex trafficking cases. In general, when sentences are severe and there are mandatory minimum penalties, it is thought that judicial discretion and the effect of ideology are limited. And so, this finding is interesting because sex trafficking defendants are given the highest sentences.

As Figure 7 shows, conspiracy sentences tend to be lower than most sex trafficking sentences. Only sex trafficking convictions carry mandatory minimum penalties. Given these reasons, it is unclear why judicial ideology is not more significant in the sample of conspiracy cases. Labor cases are included in the analysis of case types. However, the results may not be very informative due to the limited number of defendants convicted under forced labor charges.

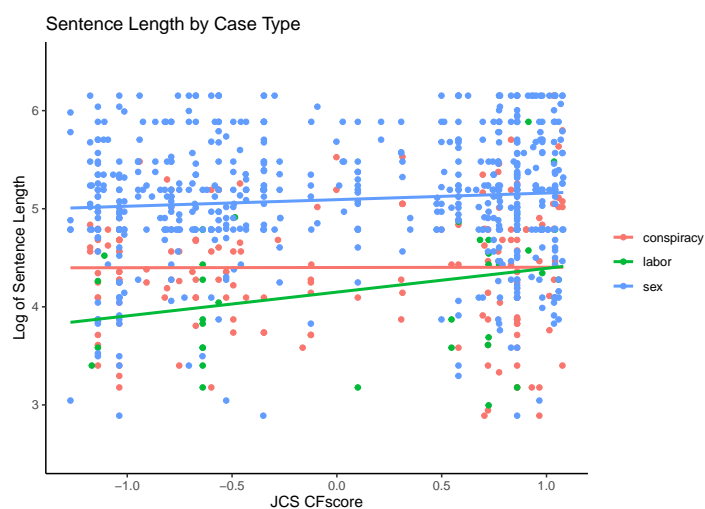


Figure 7: Sentence length by substantive offense type

According to Figure 7, the effect of judicial ideology seems to be flat in the sample of conspiracy defendants. For sex trafficking and labor defendants, higher scores (more conservative judges) result in higher sentences. Table 14, which controls for various case and defendant characteristics, finds that a one unit increase in the ideology score is correlated with an increase of about 11 months in the total sentence for sex trafficking offenses.

When including the full sample of cases, Table 15 shows that judicial ideology has a significant effect on overall sentence length. The effect of judicial ideology increases when government initiated departures are excluded, as shown by Table 16. But when a log transformation is taken of the dependent variable, judicial ideology fails to remain significant. The effect of judicial ideology is not significant across a range of alternative measures of ideology (Table 18). In addition, Table 15 shows that judicial ideology does not have a significant effect on the amount of departure from the sentencing maximum or the amount of departure from the sentencing minimum. In sum, these findings show that the overall effect of ideology is not very strong and may be limited to the final sentence length.

Interestingly, the effect of ideology on sentence length is much greater for judges appointed by Democrat presidents compared to judges appointed by Republican presidents. This finding is not captured by merely looking at the party affiliation of the appointing president. Given ideological differences between judges appointed by presidents from the same party, it is useful to analyze a sample of Democrat-appointed judges and a sample of Republican-appointed judges. Figure 8 plots the log of sentence length by the judicial common space scores. The party affiliation of the appointing president for the district judge is shown in color.

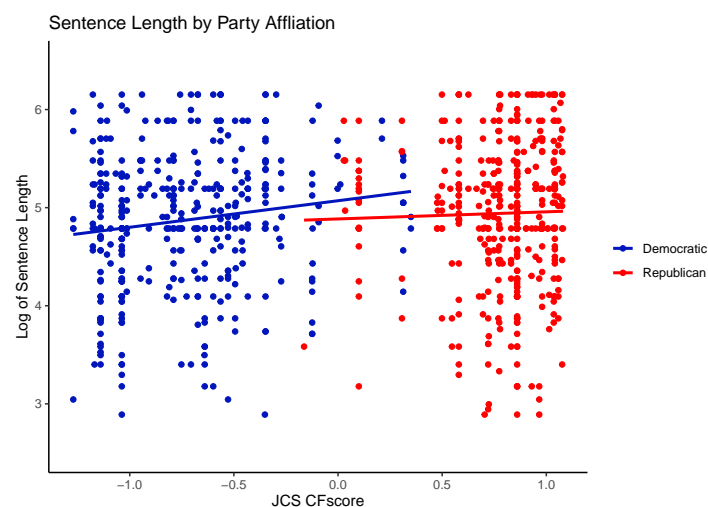


Figure 8: Sentence length by party of appointing president

It is important to note that the models in Table 19 use different samples of defendants. And so, it is not entirely helpful to compare between the sample of Democrat-appointees and the sample of Republican-appointees. In particular, the model coefficients are not easily comparable. But it is possible to observe whether the effect of ideology is statistically significant. In a sample of judges appointed by Republican presidents, ideology is not shown to have a statistically significant effect on sentence length (Model 2 in Table 19). But ideology is shown to have a statistically significant effect on sentence length for judges appointed by Democrat presidents (Model 1 in Table 19). In other words, judicial ideology affects the total sentence length, but only for judges appointed by presidents from the Democratic party. According to Table 19, a one point increase in the ideology score (judges in the Democrat-only sample range from -1.271 to -0.161) has the effect of a 34 month increase in total sentence length in the sample of Democrat-appointed judges. This is a highly significant finding, as the *p* value is less than 0.01. As Table 21 shows, this finding is also significant using an alternative measure of judicial ideology—JCS scores based on the legislative record of appointing Senators. Finally, this finding is highly significant when the log of sentence length is used as the dependent variable (Table 20).

In the Democrat-appointed judge sample, judicial ideology does not appear to have a significant effects on the amount of departure from the Guidelines (Table 22 and Table 23). For judges appointed by Democratic presidents, ideology affects the total sentence, but not the amount of departure from the Guidelines. This may be evidence that ideology has an influence on certain fact and law based adjustments. In short, ideology may have an effect on the determination of the sentencing range. But once the sentencing range is established, ideology may not have any additional effects.

In Table 15, the coefficients for judge gender are small but positive, indicating that female judges give slightly longer sentences. However, judge gender is not statistically significant in this model. Table 19 and Table 20 provide interesting results about the effects of judge gender. Notably, judge gender has a positive coefficient in the sample of Democrat-appointed judges and a negative coefficient in the sample of Republican appointed judges. In other words, female Democrat-appointed judges give longer sentences (by about 16.5 months) relative to male Democrat-appointed judges. But female Republican-appointed judges give shorter sentences (by about 23.3 months) relative to male Republican-appointed judges. In Table 19, judge gender is statistically significant at the 10% level for both models. But the effect of judge gender is stronger in the sample of Republican-appointed judges, as shown by the coefficients in Table 20.

7.2 Multinomial Logistic Regression

Table 24 and Table 25 present the results of the multinomial logistic regression model. This model excludes government initiated departures. Above range departures are included, but there are a limited number of sentences that are above the Guidelines range.

Table 24 presents the coefficients for the multinomial logistic regression model. Because the coefficients in this model output are difficult to understand, an odds ratio is used to interpret the model coefficients. Table 25 provides these results. On average, judges are 2.1 times as likely to depart downwards (compared to a sentence that is within the Guidelines) when the majority of the circuit court judges are appointed by Democratic presidents (Table 25). This result is statistically significant at the 1% level (the p value is less than 0.01). However, judicial ideology, measured by common space scores, is not statistically significant. This is consistent with the OLS results discussed previously. Overall, judicial ideology does not seem to have a large effect on sentences—including sentence length as well as the probability of departure from the Guidelines.

The predicted probabilities for each departure category are presented in Figure 9. Within, for example, refers to sentences within the Guidelines. A dotted line indicates the predicted probabilities when the circuit court is made up of a majority of Democratic appointees in the year of sentencing. Finally, the JCS CFscores measure judicial ideology, with negative values indicating more liberal judges and positive values indicating more conservative judges.

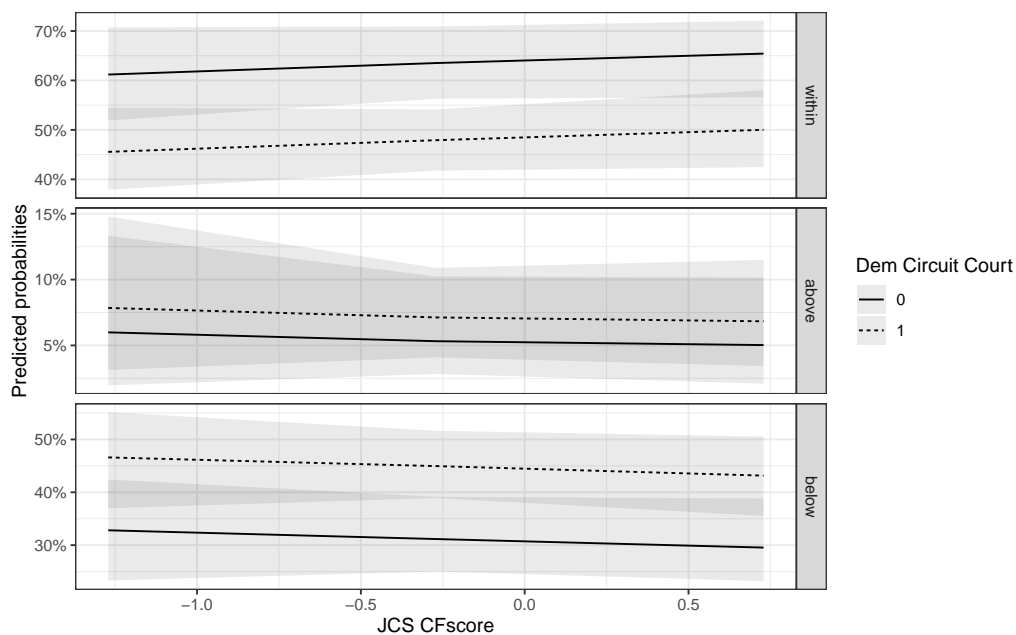


Figure 9: Predicted probabilities for departure categories

Figure 9 shows that the most conservative judges are only a few percentage points less likely to issue downward departures than the most liberal judges. Ideology, measured by judicial common space scores, has a small effect on the probabilities in each category. The partisan composition of the circuit court, rather than an individual judge's ideology, has a greater effect on the probability of certain departures. To interpret the coefficients of Table 24, a first difference analysis was performed. Figure 10 shows the effect in terms of probabilities when the Circuit court is majority Democrat-appointed in the year of sentencing. This provides a coefficient that can be interpreted in terms of the probability of a particular departure category. When the circuit court is made up of a majority of judges appointed by Democratic presidents, the probability of a sentence within the Guidelines is 16.4 percent lower. The probability of a sentence below the Guidelines is 14.9 percentage points higher. The effect on above departures is small or nonexistent.

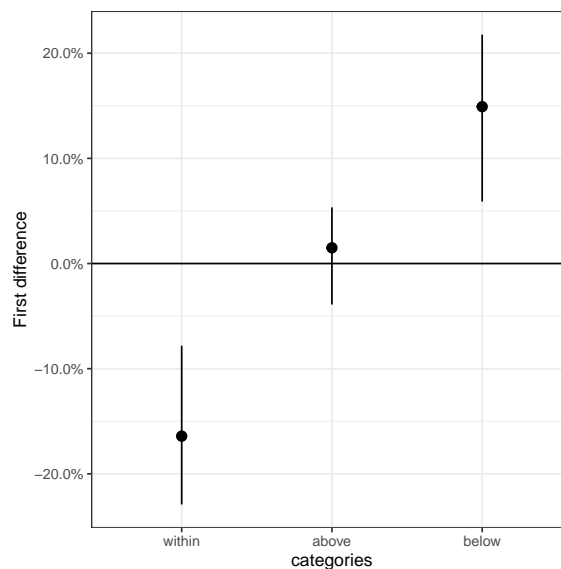


Figure 10: Difference when circuit court is majority Democratic

The first difference analysis shows that the probability of within range sentences roughly trades off with the probability of below departures. Consistent with previous studies, above departures are not commonly used as an alternative option. This is consistent with the assumption that departures are subject to stricter appellate review. And so, individual judge ideology may be constrained by other factors, such as the desire to avoid reversals.

Finally, judge gender does appear to have an interesting effect on the probability of departure. According to Table 25, female judges are 1.5 times as likely to depart downwards. Judge gender is statistically significant at the 10% level but not the 5% level.

7.3 OLS Regression with Interaction Terms

This section discusses results for OLS regressions that include political alignment as an interaction term. What is especially interesting is that circuit court composition has effects for both Democratic as well as Republican district judges. The impact of this can be quantified in terms of sentence length. As the results of Table 26 show, when there is a majority Democratic circuit court, the average total sentence is reduced. When there is a Democratic district judge, the average total sentence is also lower. However, the partisan composition of the circuit court has a larger impact on sentence length than the individual partisan affiliation of the district judge.

To interpret the effect of political alignment, we can take the sum total of the two coefficients and the interaction term (Dem, Dem Circuit, and Dem x Dem Circuit). When a Democrat-appointed district judge is in a majority Democrat-appointed circuit, the average sentence is 26.8 months lower. Compare this to the coefficient of Dem, which shows that the average sentence for non-aligned Democrat-appointed judges is 22.1 months lower. In other words, political alignment for Democrat-appointed district judges decreases sentences by about 4.7 months. Given this fact, circuit alignment does not seem to have a very large effect for Democrat-appointed judges. In contrast, when Republican district judges are aligned with the circuit court, the effect of political alignment is much greater—sentences are increased by 27.9 months. The effect of partisan alignment with the circuit court (by the interaction term Dem x Dem Circuit) was statistically significant at the 10% level but not statistically significant at the 5% level (p value = 0.09193).

When government initiated departures are excluded, the effects of political ideology and circuit court composition are much greater. This is consistent with the hydraulic theory of judging, which predicts that increases in prosecutorial discretion reduce judicial discretion. But consistent with the findings in the full sample, political alignment has larger effects for Republican-appointed judges. In contrast, political alignment has little to no effect for Democrat-appointed judges in this sample. The results of Table 27 find that when a Democrat-appointed district judge is politically aligned with the circuit court, the average sentence is 40.6 months lower. When a Democrat-appointed district judge is not politically aligned, the average sentence is 41.4 months lower. Thus, there is not a large effect from political alignment. For Republican-appointed judges, sentences are 35.7 months lower when the circuit court is majority Democrat-appointees (conversely, 35.7 months higher when the circuit court is majority Republican-appointees). Both the effects of political ideology and circuit court composition are a considerable discount, given that the average sentence is 202 months when

government initiated departures are excluded. Additionally, the interaction term is more significant in this sample of defendants. In Model 1 of Table 27, the interaction term is just outside the 5% level, with a p value of 0.0677.

Figure 11 plots the interactive coefficients in Table 26 (full sample) and Table 27 (excluding government departures). This figure provides a clearer illustration of the results above. On the x-axis, a value of 0 indicates that there is a Republican-appointed district judge. A value of 1 indicates that there is a Democrat-appointed district judge. The partisan composition of the circuit court is presented by different colors.

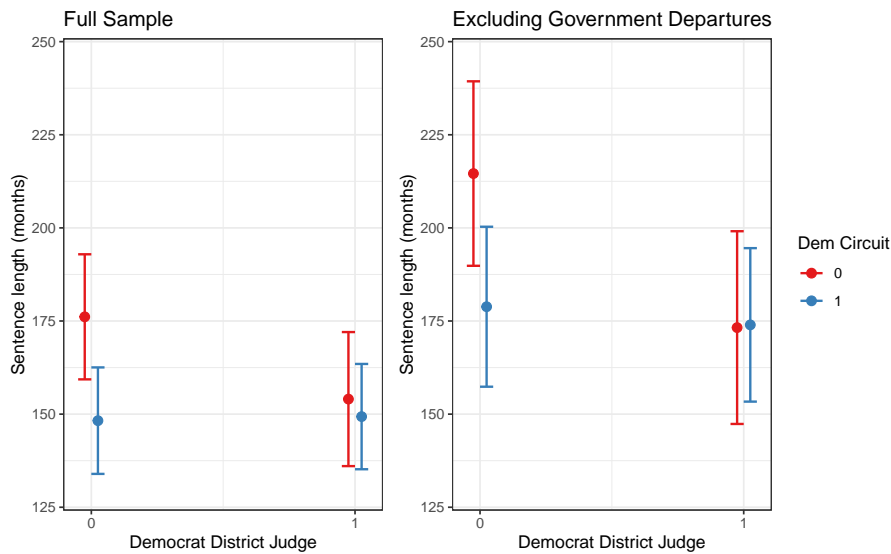


Figure 11: Interaction effects of political alignment

When there is a Democrat-appointed district judge, political alignment (shown in the blue) has little to no effect on sentence length. When there is a Republican-appointed district judge, political alignment has a much greater effect on sentence length. When the circuit court is majority Republican-appointees, Republican district judges tend to give longer sentences (shown in red). Thus, political alignment matters more for Republican-appointed district judges than Democrat-appointed district judges.

Models 2 and 3 from Table 26 and Table 27, which examine the amount of departure from the Guidelines maximum and minimum, are also worth discussing. Only judge age is statistically significant in these models. The coefficient is negative and the effect is almost twice as large in the sample that excludes government initiated departures. Most studies on sentencing have not paid attention to judge age—it is possible that human trafficking, a relatively newer offense, may be

viewed differently by younger judges. This may also be due to the fact that younger judges who are appointed post-Booker are less anchored to the Sentencing Guidelines (Yang, 2014).

Notably, judge gender does not seem to have a statistically significant effect on sentence length in Table 26 and Table 27. The coefficient of judge gender is positive, showing that female judges give longer sentences. On the other hand, the results from the multinomial logistic regression indicate that female judges are more likely to depart below the Sentencing Guidelines. The overall findings on judge gender are mixed, and suggest that the relationship between gender and sentencing for trafficking offenses is complex. For example, it is possible that female judges—compared to male judges—are more likely to issue departures but also sentence defendants that are within or above the Guidelines more harshly.

8 Discussion

Human trafficking cases are not like typical “street crimes.” Accordingly, sentencing for human trafficking offenses does not proceed like sentencing for street crimes (Schanzenbach & Tiller, 2007). First, the findings in this thesis show that there are important gender dynamics in trafficking cases. As I have shown in the preliminary analysis, female defendants are given substantially lower sentences even when controlling for a variety of case based factors. And female judges seem to respond differently depending on political affiliation. Second, many trafficking cases involve complex factors that relate to other criminal offenses. For example, some cases may also involve drug trafficking. In multiple cases, drugs were used as one of the methods of coercion.⁴³ This makes studying ideology difficult since there may be substantive differences that are not related to the human trafficking aspect. For example, judges may respond differently to human trafficking cases that also involve drugs as a method of coercion. And like other sex offenses, some defendants convicted of human trafficking offenses resemble white collar criminals. These dimensions may partially explain why the effect of ideology is not unified across the political spectrum.

Hypothesis 1A is partially supported. Ideology, measured by judicial common space scores, has a statistically significant effect, but only for Democrat-appointed judges. More liberal judges do give shorter sentences relative to more conservative judges, but the relationship between ideology and sentence length is not linear. Several possible explanations are worth considering. First, it may be

⁴³ United States v. Blake, No. 9:13-cr-80054 (S.D. Fla. Mar. 7, 2013); United States v. Washington, No. 3:16-cr-00131 (E.D. Tenn. Mar. 27, 2017).

that sentences are already very severe. And so, sentences may reach a point (a peak, so to speak) in which ideology no longer seems to have an influence. For an offense where the sentences are lower on average, ideology may have a more linear effect. Alternatively, it may be the case that Democrat-appointed judges are less unified in their approaches to sentencing. As the judicial common space scores indicate, there is greater ideological uniformity for Republican-appointed judges. More generally, Democrat-appointed judges may differ depending on the nature of the criminal activity, such as whether the defendant resembles a white collar criminal.⁴⁴ This explanation may be supported by previous studies like Schanzenbach and Tiller (2007), finding that Democrat-appointed judges may sentence more harshly than Republican-appointed judges for white collar crimes.

The findings on ideology are consistent with the predictions of the instrument choice theory of judicial sentencing. Ideology has an impact on the overall sentence length, but not on amount of variance from the Guidelines. This shows the effect of ideology is not solely captured by variation within the Guidelines range—for example, if Democrat-appointed judges usually give sentences on the lower end of the sentencing range and Republican-appointed judges usually give sentences on the higher end of the sentencing range. The findings on ideology suggest that some judges may be using adjustments and other fact-based tools to advance their sentencing preferences. There is, however, a question about whether the observed differences are related to genuine *preferences* that judges may have. It is hard to determine what judges are really thinking when they make sentencing decisions. It may be the case that Democrat-appointed judges simply approach certain sentencing questions differently. But this, I think, gets at a broader question of whether the assumptions of the model of judges as strategic decision-makers are accurate. The findings from this thesis merely support the predictions of a theory of sentencing that models judges as strategic policy-maximizers. But that is not say that the theory itself is accurate.

For Hypothesis 1B, the results show that judge gender is not statistically significant at the 5% level. Overall, judge gender has little to no effect on sentencing. However, the interesting and surprising finding is that the effect of judge gender seems to differ depending on the political affiliation of the appointing president. That is, gender has effects for Republican-appointed judges that are in a different direction than effects for Democrat-appointed judges. This indicates that there may be interesting interactions between gender and ideology. However, it is difficult to study this given the limited number of female judges in the sample. Another interesting question is how female

⁴⁴ For example, *United States v. Epstein*, 19 CR. 490 (RMB) (S.D.N.Y. Jul. 18, 2019). I use the term “white collar” to refer to defendants who are, on average, wealthier and more educated.

judges sentence female defendants. But this is also difficult to study given the limitations of the final dataset.

Hypothesis 2 is not supported since judicial ideology has little to no effect in the multinomial regression model. However, the partisan composition of the circuit court was found to have a large effect on the likelihood of judicial departures below the range determined by the Sentencing Guidelines. Circuit court composition influences the choice of instrument, that is, the probability of below departures. This finding confirms the positive political theory of criminal sentencing that models judges as strategic actors within an existing hierarchy. If anything, these results show that partisan composition of the circuit court may matter more than the political affiliation of the individual judge. It is unclear whether this effect is unique to human trafficking cases. In general, these results strongly support a sentencing theory that models judges as acting within an existing hierarchy.

Hypothesis 3 is partially supported. Political alignment seems to have larger effects for Republican-appointed judges. Consistent with 3B, sentences are higher when Republicans are politically aligned with the circuit court. When Democrats are aligned, there is not a large effect on sentence length, showing that 3A is not supported. As shown by Schanzenbach and Tiller (2007), “alignment matters, and matters differently, for Republican and Democrat judges.” It is unclear, however, why alignment seems to matter more for Republican-appointed judges. But this finding does seem to support the instrument choice theory. Democrat-appointed judges may be inclined to use various instruments to advance their sentencing goals—when the circuit court is majority Democrat-appointees, Democrat-appointed district judges choose to depart (shown by the multinomial logistic regression model). But when the circuit court is majority Republican-appointees, Democrat-appointed district judges use adjustments to advance their sentencing preferences.

The findings of this thesis show that the effect of ideology between judges appointed by presidents from the same party is worth further investigation. It has already been observed there are sentencing differences between Republican-appointed judges and Democrat-appointed judges. But there has not been much analysis of the differences in judging between more liberal and more conservative judges appointed by presidents from the same party. Furthermore, these findings strongly suggest that sentencing scholarship should include a focus on the ideological features of appellate courts. Circuit court ideology can also be measured using judicial common space scores, which allows for more fine-grained analyses of the relationship between circuit courts ideology and district court sentencing.

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Table 7: Preliminary Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Gender	1,230	0.2	0.4	0	0	0	1
Age	1,230	31.8	9.8	18	25	36	79
Citizenship	1,227	0.9	0.3	0.0	1.0	1.0	1.0
White	1,224	0.1	0.4	0.0	0.0	0.0	1.0
Hispanic	1,224	0.2	0.4	0.0	0.0	0.0	1.0
Black	1,224	0.7	0.5	0.0	0.0	1.0	1.0
Crim Hist	1,228	0.9	0.3	0.0	1.0	1.0	1.0
Counts	1,230	2.1	3.5	1	1	2	89
Plea	1,230	0.8	0.4	0	1	1	1
Sentence	1,230	167.9	116.4	0	84	216	470
Restitution	1,142	42,649.0	240,738.1	0.0	0.0	0.0	3,949,141.0

Table 8: Preliminary Variable Counts

	Female	White	Hispanic	Black	Crim Hist	Plea	Restitution
0 = no	1,005	1,042	1,032	404	105	194	869
1 = yes	225	182	192	820	1,123	1,036	360

Table 9: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Gender	834	0.2	0.4	0	0	0	1
Age	834	31.4	9.5	18	25	35	79
Citizen	833	0.9	0.3	0.0	1.0	1.0	1.0
White	830	0.1	0.4	0.0	0.0	0.0	1.0
Hispanic	830	0.2	0.4	0.0	0.0	0.0	1.0
Black	830	0.7	0.5	0.0	0.0	1.0	1.0
Crim Hist	833	0.9	0.3	0.0	1.0	1.0	1.0
Counts	834	2.0	3.7	1	1	2	89
Plea	834	0.9	0.4	0	1	1	1
Sentence	834	169.2	113.1	0	87	214.2	470
Restitution	782	30,464.6	190,044.9	0.0	0.0	0.0	3,790,339.0

Table 10: Defendant Variable Counts

	Female	White	Hispanic	Black	Crim Hist	Plea	Restitution
0 = no	698	708	701	264	61	121	620
1 = yes	136	122	129	566	772	713	213

Table 11: Judge Variable Counts

	Female	White	Hispanic	Black	Democrat	Circuit Dem
0 = no	623	160	770	758	425	306
1 = yes	211	674	64	76	409	528

Table 12: Sentence Length and Departures with Preliminary Data

	<i>Dependent variable:</i>		
	Sentence Length	Departure from Max	Departure from Min
	(1)	(2)	(3)
Gender (1 = female)	-67.202*** (7.029)	-29.480*** (6.489)	-34.489*** (5.870)
Age	1.156*** (0.293)	0.220 (0.270)	0.313 (0.244)
Education	-3.779** (1.725)	0.024 (1.593)	-0.234 (1.441)
Hispanic (1 = yes)	11.741 (9.562)	1.239 (8.827)	5.766 (7.985)
Black (1 = yes)	23.273*** (7.653)	-15.221** (7.065)	-9.590 (6.391)
Crim Hist (1 = yes)	30.291*** (10.001)	-40.632*** (9.232)	-27.770*** (8.351)
Plea (1 = yes)	-132.110*** (8.013)	-13.025* (7.398)	-15.070** (6.692)
Restitution (1 = yes)	30.363*** (5.959)	-10.086* (5.501)	-6.678 (4.976)
Counts	3.420*** (0.827)	-0.778 (0.764)	-1.088 (0.691)
Year	2.246** (1.088)	-4.266*** (1.006)	-3.472*** (0.910)
Constant	-4,321.990** (2,191.268)	8,565.096*** (2,024.638)	6,989.426*** (1,831.559)
Observations	1,210	1,209	1,209
R ²	0.374	0.064	0.064
Adjusted R ²	0.368	0.055	0.055

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results where the dependent variables are (1) sentence length, (2) departure from the final guidelines maximum calculation, and (3) departure from the final guidelines minimum calculation. The dependent variables are conceptualized in months.

Table 13: Log of Sentence Length with Preliminary Data

<i>Dependent variable:</i>	
Log of Sentence Length	
Gender	−0.789*** (0.066)
Age	0.009*** (0.003)
Education	−0.021 (0.016)
Hispanic	0.149* (0.089)
Black	0.243*** (0.071)
Crim Hist	0.214** (0.094)
Plea	−0.727*** (0.074)
Restitution	0.177*** (0.055)
Counts	0.014* (0.008)
Year	0.014 (0.010)
Constant	−24.197 (20.336)
Observations	1,197
R ²	0.264
Adjusted R ²	0.257

*p<0.1; **p<0.05; ***p<0.01

Note: Given the skewed distribution of sentences, this table shows OLS results with natural log transformation of sentence length. This table checks the robustness of the results of 12. Nonincarcerative sentences were dropped, resulting in 13 fewer observations compared to the OLS model using total sentence length as the dependent variable.

Table 14: Sentence Length by Case Type

	<i>Model:</i>		
	Conspiracy	Sex	Labor
	(1)	(2)	(3)
Gender (1 = female)	-18.602*	-75.851***	23.467
	(10.971)	(11.306)	(54.335)
Age	0.910	0.877**	1.569
	(0.654)	(0.425)	(1.041)
Education	-1.655	-2.123	-6.978
	(3.309)	(2.390)	(8.449)
Hispanic (1 = yes)	-2.511	-6.969	-8.776
	(17.758)	(14.140)	(37.576)
Black (1 = yes)	1.739	1.759	45.859*
	(14.872)	(11.270)	(25.762)
Crim Hist (1 = yes)	-10.084	27.425*	-5.273
	(17.957)	(15.775)	(35.909)
Plea (1 = yes)	-48.790	-75.321***	36.564
	(71.441)	(10.721)	(63.652)
Restitution (1 = yes)	3.408	39.657***	-19.090
	(12.887)	(8.587)	(27.204)
Counts	5.647	14.006***	1.924
	(24.703)	(1.678)	(1.169)
Year	5.756**	1.797	-7.885*
	(2.573)	(1.688)	(4.592)
Ideology (JCS CFscore)	8.554	11.430**	-8.876
	(6.538)	(4.683)	(16.904)
Judge Age	-0.287	-0.377	-3.700**
	(0.610)	(0.440)	(1.571)
Judge Gender	-1.176	8.132	-99.604**
	(11.508)	(8.926)	(42.418)
Constant	-11,444.790**	-3,422.300	16,119.180*
	(5,175.147)	(3,395.742)	(9,241.423)
Observations	172	613	37
R ²	0.090	0.383	0.511
Adjusted R ²	0.015	0.369	0.234

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results where the dependent variable is sentence length. Model 1 includes conspiracy offenses, Model 2 includes sex trafficking offenses, and Model 3 includes labor trafficking offenses.

Table 15: Sentence Length and Amount of Departure

	<i>Dependent variable:</i>		
	Sentence Length	Departure from Max	Departure from Min
	(1)	(2)	(3)
Ideology (JCS CFscore)	9.071** (4.322)	0.037 (3.807)	2.033 (3.399)
Judge Age	-0.097 (0.416)	-0.745** (0.366)	-0.854*** (0.327)
Judge Gender	3.562 (7.843)	1.462 (6.936)	1.186 (6.194)
Judge Hispanic	8.519 (12.887)	-24.129** (11.331)	-20.730** (10.119)
Judge Black	11.758 (11.657)	-3.382 (10.247)	-3.820 (9.150)
Constant	-6,120.473** (3,045.359)	4,123.014 (2,681.420)	2,620.006 (2,394.519)
Observations	822	818	818
R ²	0.316	0.053	0.061
Adjusted R ²	0.303	0.035	0.044

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results of the final dataset where the dependent variables are (1) sentence length, (2) departure from the final guidelines maximum calculation, and (3) departure from the final guidelines minimum calculation. The dependent variables are conceptualized in months. Not reported: defendant characteristics (gender, age, education, race), criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 16: Excluding Government Initiated Departures

	<i>Dependent variable:</i>		
	Sentence Length	Departure from Max	Departure from Min
	(1)	(2)	(3)
Ideology (JCS CFscore)	15.120** (6.498)	2.901 (4.647)	4.333 (4.129)
Judge Age	-0.178 (0.583)	-1.316*** (0.416)	-1.428*** (0.370)
Judge Gender	10.666 (11.353)	-7.129 (8.175)	-7.162 (7.263)
Judge Hispanic	22.125 (20.045)	1.904 (14.295)	9.463 (12.700)
Judge Black	9.303 (15.924)	-13.358 (11.354)	-14.852 (10.087)
Constant	-8,477.094* (4,341.418)	10.397 (3,104.383)	-1,111.045 (2,757.974)
Observations	499	495	495
R ²	0.274	0.099	0.096
Adjusted R ²	0.251	0.071	0.068

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results of the final dataset where the dependent variables are (1) sentence length, (2) departure from the final guidelines maximum calculation, and (3) departure from the final guidelines minimum calculation. The dependent variables are conceptualized in months. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 17: Log of Sentence Length

	<i>Dependent variable:</i>
	Log of Sentence Length
Ideology (JCS CFscore)	0.042 (0.028)
Judge Age	0.001 (0.003)
Judge Gender	−0.020 (0.051)
Judge Hispanic	0.098 (0.084)
Judge Black	0.185** (0.077)
Constant	−42.627** (19.966)
Observations	818
R ²	0.290
Adjusted R ²	0.276

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results using natural log transformation of sentence length. This table checks the robustness of the results of Table 15. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 18: Robustness to Alternative Measures of Ideology

	<i>Model:</i>		
	(1)	(2)	(3)
JCS DW-Nominate	6.587 (8.207)		
President DW-Nominate		5.780 (6.271)	
President CFscore			5.673 (3.902)
Judge Age	0.051 (0.410)	0.039 (0.411)	−0.058 (0.426)
Judge Gender	2.267 (7.862)	2.689 (7.910)	2.900 (7.856)
Judge Hispanic	11.986 (12.873)	11.610 (12.892)	10.236 (12.913)
Judge Black	10.938 (11.677)	11.164 (11.681)	11.569 (11.677)
Constant	−5,457.776* (3,033.430)	−5,449.433* (3,031.190)	−5,830.951* (3,047.074)
Observations	822	822	821
R ²	0.313	0.313	0.314
Adjusted R ²	0.300	0.300	0.302

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results when dependent variable is sentence length. This table checks the robustness of the results of Table 15 using alternative measures of judicial ideology. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 19: Sentence Length by Party Affiliation

	<i>Model:</i>	
	Democrat	Republican
	(1)	(2)
Ideology (JCS CFscore)	33.954*** (12.748)	31.978 (21.388)
Judge Age	-0.241 (0.518)	-0.309 (0.643)
Judge Gender	16.458* (8.968)	-23.253* (13.506)
Constant	-5,961.712 (4,199.031)	-6,527.614 (4,286.522)
Observations	406	416
R ²	0.397	0.344
Adjusted R ²	0.377	0.322

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results where the defendant variable is sentence length in months. Model 1 includes sentencing decisions by Democrat appointed judges. Model 2 includes sentencing decisions by Republican appointed judges. Dummy variables of judge race were excluded due to limited data. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 20: Log of Sentence Length by Party Affiliation

	<i>Model:</i>	
	Democrat	Republican
	(1)	(2)
Ideology (JCS CFscore)	0.234*** (0.089)	0.096 (0.137)
Judge Age	-0.001 (0.004)	-0.003 (0.004)
Judge Gender	0.076 (0.063)	-0.222** (0.086)
Constant	-30.827 (29.401)	-64.841** (27.294)
Observations	405	413
R ²	0.336	0.317
Adjusted R ²	0.314	0.295

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results using natural log transformation of sentence length. This table checks the robustness of the results of Table 19. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 21: Robustness to Alternative Measure of Ideology for Democratic Appointed Judges

<i>Dependent variable:</i>	
Sentence Length	
JCS DW-Nominate	114.275** (45.734)
Judge Age	0.286 (0.490)
Judge Gender	15.533* (9.001)
Constant	−3,751.792 (4,086.349)
Observations	406
R ²	0.396
Adjusted R ²	0.376

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results when dependent variable is sentence length. This table checks the robustness of the results of Table 19 using alternative measures of judicial ideology. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 22: Amount of Departure by Democratic Judges

<i>Dependent variable:</i>		
	Max Depart	Min Depart
	(1)	(2)
Ideology (JCS CFscore)	−3.768 (12.150)	4.736 (10.836)
Judge Age	−0.895* (0.495)	−0.906** (0.441)
Judge Gender	3.581 (8.593)	3.768 (7.663)
Constant	2,916.072 (4,007.425)	2,102.460 (3,574.087)
Observations	404	404
R ²	0.103	0.104
Adjusted R ²	0.074	0.074

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results where the dependent variables are (1) departure from the final guidelines maximum calculation, and (2) departure from the final guidelines minimum calculation. This table only includes defendants sentenced by Democrat appointed judges. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 23: Amount of Departure by Republican Judges

	<i>Dependent variable:</i>	
	Max Depart	Min Depart
	(1)	(2)
Ideology (JCS CFscore)	14.529 (18.687)	14.089 (16.655)
Judge Age	0.093 (0.562)	-0.320 (0.501)
Judge Gender	4.098 (11.861)	-0.836 (10.571)
Constant	6,499.880* (3,750.812)	3,402.652 (3,343.090)
Observations	414	414
R ²	0.037	0.059
Adjusted R ²	0.006	0.029

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results where the dependent variables are (1) departure from the final guidelines maximum calculation, and (2) departure from the final guidelines minimum calculation. This table only includes defendants sentenced by Republican appointed judges. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 24: Multinomial Logistic Regression Estimates

	<i>Category:</i>	
	above range	below range
	(1)	(2)
Judge Age	-0.090*** (0.027)	0.026** (0.012)
Judge Gender	-1.465*** (0.031)	0.431* (0.235)
JCS CFscore	-0.113 (0.281)	-0.108 (0.130)
Dem Circuit	0.587*** (0.040)	0.745*** (0.215)
Observations	509	509
Akaike Inf. Crit.	806.533	806.533

*p<0.1; **p<0.05; ***p<0.01

Note: Results for the multinomial logistic regression using departure categories as the dependent variable. This sample drops government sponsored departures, including substantial assistance motions. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 25: Odds Ratio for Departures

	<i>Category:</i>	
	above range	below range
	(1)	(2)
Judge Age	0.914*** (0.027)	1.027** (0.012)
Judge Gender	0.231*** (0.031)	1.538* (0.235)
JCS CFscore	0.893 (0.281)	0.898 (0.130)
Dem Circuit	1.799*** (0.040)	2.107*** (0.215)
Observations	509	509
Akaike Inf. Crit.	806.533	806.533

*p<0.1; **p<0.05; ***p<0.01

Note: Odds ratio for the multinomial logistic regression. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 26: Sentencing and Political Alignment

	<i>Dependent variable:</i>		
	Sentence Length	Departure from Max	Departure from Min
	(1)	(2)	(3)
Judge Age	-0.075 (0.395)	-0.585* (0.349)	-0.684** (0.312)
Judge Gender	5.469 (7.931)	-0.358 (7.025)	-0.422 (6.278)
Democrat	-22.084** (11.058)	10.715 (9.753)	6.037 (8.716)
Democrat Circuit	-27.876*** (9.584)	16.826** (8.470)	12.027 (7.569)
Dem x Dem Circuit	23.173* (13.734)	-12.938 (12.127)	-8.477 (10.837)
Constant	-6,259.579** (3,042.778)	4,798.973* (2,685.906)	3,309.979 (2,400.228)
Observations	822	818	818
R ²	0.319	0.053	0.059
Adjusted R ²	0.307	0.035	0.042

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results where the dependent variables are (1) sentence length, (2) departure from the final guidelines maximum calculation, and (3) departure from the final guidelines minimum calculation. The dependent variables are conceptualized in months. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.

Table 27: Sentencing and Political Alignment Excluding Government Initiated Departures

	<i>Dependent variable:</i>		
	Sentence Length	Departure from Max	Departure from Min
	(1)	(2)	(3)
Judge Age	−0.174 (0.563)	−1.191*** (0.403)	−1.302*** (0.359)
Judge Gender	14.274 (11.433)	−6.570 (8.232)	−6.552 (7.325)
Democrat	−41.353** (16.155)	−7.486 (11.555)	−13.572 (10.281)
Democrat Circuit	−35.753** (14.221)	−11.987 (10.196)	−14.832 (9.072)
Dem x Dem Circuit	36.479* (19.919)	5.935 (14.268)	12.632 (12.695)
Constant	−7,756.152* (4,342.242)	−137.499 (3,109.693)	−1,030.292 (2,766.874)
Observations	499	495	495
R ²	0.276	0.099	0.093
Adjusted R ²	0.253	0.070	0.065

*p<0.1; **p<0.05; ***p<0.01

Note: OLS results where the dependent variables is sentence length. Not reported: defendant characteristics, criminal history, case disposition, order of restitution, number of counts, and sentencing year.